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ABSTRACT

This book synthesizes research to identify specific teacher behaviors that contribute to student achievement, focusing on what teachers can control (preparation, personality, and practices). Part 1 examines teacher effectiveness. Chapter 1 investigates prerequisites of effective teaching, particularly the influence of background and professional preparation. Chapter 2 examines what effective teachers are like as people, highlighting nonacademic interactions with students and aspects of teacher behavior that make teachers loved, respected, and remembered. Chapter 3 considers management and organizational skills effective teachers display, emphasizing effective learning environments in which routines and discipline are maintained as a backdrop for instruction and student engagement. Chapter 4 examines organization for instruction, particularly maximizing the amount of time allocated for instruction, communicating expectations for achievement, and planning for instructional purposes. Chapter 5 discusses implementation of instruction, emphasizing communication and complexity of instructional content using appropriate questioning techniques and supporting active learning. Chapter 6 examines monitoring student progress and potential through discussing the importance of homework and applying findings of student learning outcomes. Chapter 7 describes what an effective teacher is and how to improve effectiveness. Part 2 includes teacher skills assessment checklists, behaviors to look for in effective performance, an annotated bibliography, and references. (Contains 102 references.) (SM)

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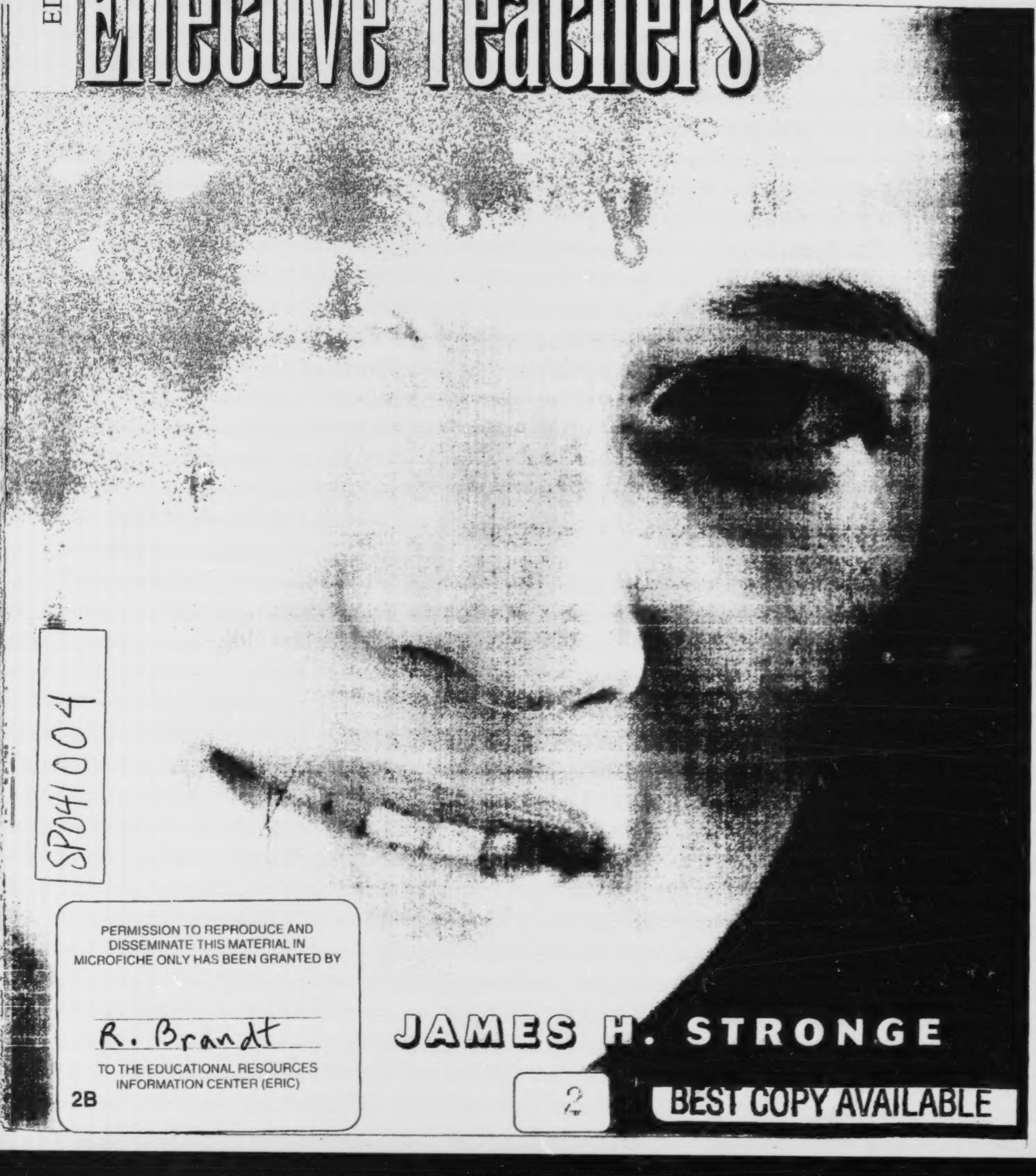

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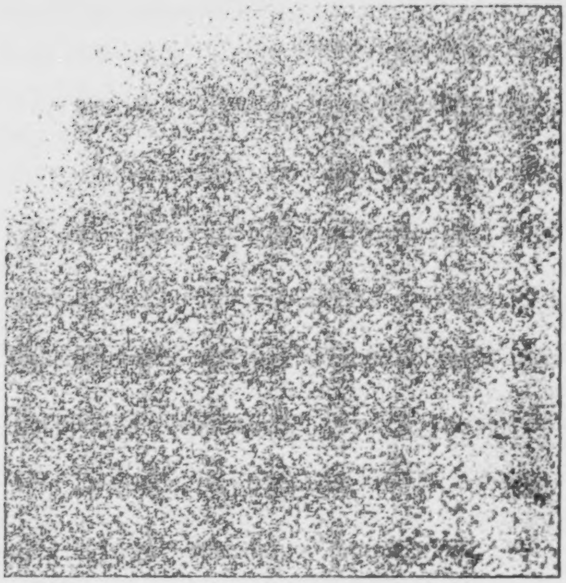

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To my wife, Terri, a gifted teacher of young children,

and

to devoted teachers everywhere

Qualities of Effective Teachers

Acknowledgments vi
Introduction vii

PART 1 WHAT IT MEANS TO BE AN EFFECTIVE TEACHER 1
1 Prerequisites of Effective Teaching 3
2 The Teacher as a Person 13
3 Classroom Management and Organization 25
4 Organizing for Instruction 33
5 Implementing Instruction 42
6 Monitoring Student Progress and Potential 52
7 Effective Teaching: What Does It All Mean? 61

PART 2 TEACHER EFFECTIVENESS: RESOURCES YOU CAN USE 67
Section I: Teacher Skills Assessment Checklists 69
Section II: Teacher Responsibilities and Behaviors 77
Section III: Annotated Bibliography 95

References 118
Index 124
About the Author 129

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Introduction

The focus for this book is the teacher. The content is presented within the context of a person—the teacher—as opposed to viewing teaching skills as isolated processes. The book is research-based, and the style and format are designed to be user-friendly providing easy-to-use summaries and tools for teacher effectiveness.

If finding or becoming an effective teacher were simple, this book would not be needed. If a single method for developing an effective teacher existed, such a teacher would be in every classroom. Nonetheless, there are common attributes that characterize effective teachers.

Teachers have a powerful, long-lasting influence on their students. They directly affect how students learn, what they learn, how much they learn, and the ways they interact with one another and the world around them. Considering the degree of the teacher's influence, it is important to understand what teachers should do to promote positive results in the lives of students—with regard to school achievement, positive attitudes toward school, interest in learning, and other desirable outcomes. This understanding should be based both on what experts and stakeholders think teachers should do and on what educational research has shown to be significant in the preparation and practice of effective teachers.

Qualities of Effective Teachers chronicles the common background and identifies the common behaviors that characterize effectiveness in the classroom. Based on a comprehensive review and synthesis of research related to effective teaching, the book serves as a resource for teachers, administrators, and others interested in improving the quality of teaching and learning in our schools.

Defining an Effective Teacher

Effectiveness is an elusive concept when we consider the complex task of teaching. Some researchers define teacher effectiveness in terms of student achievement. Others focus on high performance ratings from supervisors. Still others rely on comments from students, administrators, and other interested stakeholders. In fact, in addition to *effective*, we vacillate on just how to refer to successful teachers. Cruickshank and Haefele (2001) noted that good teachers, at various times, have been called *ideal, analytical, dutiful, competent, expert, reflective, satisfying, diversity-responsive,* and *respected*.

A teacher's influence is far reaching, so it is challenging to define what outcomes might show effectiveness and how those outcomes should be measured. In addition, many variables outside the teacher's control also affect each of the potential measures of effectiveness.

Despite the various complexities and regardless of what we call them, we can agree that effective teachers do make an extraordinary and lasting impact on the lives of students. In recent years, as the field of education has moved toward a stronger focus on accountability and on careful analysis of variables affecting educational outcomes, the teacher has proven time and again to be the most influential school-related force in student achievement. Consequently, in an attempt to develop an understanding of what teachers do to cause significant student learning, researchers have begun to focus on the specific characteristics and teaching processes employed by the most effective teachers.

The growing body of research concerned with teacher effectiveness has reinforced the notion that specific characteristics and behaviors matter in teaching, in terms of student achievement as well as other desirable outcomes. Although looking across studies yields some inconsistencies in defining elements of effectiveness, careful exploration of the research, nevertheless, helps confirm which practices are most important and which require further investigation. Commonalities highlighted in *Qualities of Effective Teachers* include characteristics of the teacher as an individual, teacher preparation, classroom management, and the way a teacher plans, teaches, and monitors student progress. Put these jigsaw pieces together and a portrait of an effective teacher takes shape.

Overview

Qualities of Effective Teachers sheds light on the elusive concept of teacher effectiveness by summarizing research results accumulated across several decades to define specific teacher behaviors that contribute to student achievement and other measures of effectiveness. The book was developed by focusing specifically on the *teacher* and her or his preparation, personality, and practice, rather than on other influences such as student demographics, school and district administration, or organizational decision-making outside the teacher's control. The sources considered in creating this synthesis of teacher background and behaviors include broad-based studies of teacher practice as linked to student achievement, case studies of teachers identified as effective within specific contexts, surveys and interviews among stakeholders, meta-analyses of teacher effectiveness studies, and other reviews of research.

The research findings and recommended practices identified in this book should seem like old friends to many teachers. For these effective teachers, the book should serve as a review and reminder for continued improvement. For others, the same findings serve to build awareness as they take steps to enhance their effectiveness. By focusing on teacher effectiveness, our ultimate goal is to improve the educational experiences and achievement of the students we serve in our schools.

Organization of the Book

Qualities of Effective Teachers is designed to serve as a resource and reference tool for educators. It identifies elements of effective teaching within broad categories and points readers interested in further exploration to the research studies and reviews used in the preparation of the text. The book is divided into two parts. Part 1 focuses on the research useful in developing a profile of what an effective teacher is, and Part 2 contains myriad resources.

The first six chapters address major categories of teacher effectiveness. The first two chapters explore the teacher as an individual and as a professional.

- Chapter 1 investigates prerequisites of effective teaching, focusing on the influence of a teacher's background and professional preparation. The implications of verbal ability, content knowledge, educational coursework, and teacher certification are explored.
- Chapter 2 examines what the effective teacher is like as a person, focusing on a teacher's nonacademic interactions with students and on the aspects of a teacher's behavior that make her loved, respected, and remembered by students as personally effective. This chapter also explores the significance of the teacher's professional attitude. This discussion emphasizes dedicated and reflective practice among effective teachers.

Chapters 3 through 6 focus more specifically on aspects of a teacher's job responsibilities and practices.

- Chapter 3 considers the management and organizational skills an effective teacher displays, with emphasis on the establishment of an effective learning environment in which routines and discipline are established and maintained to serve as a backdrop for instruction and student engagement.

- Chapter 4 investigates organization for instruction with a focus on maximizing the amount of time allocated for instruction, communicating expectations for student achievement, and planning for instructional purposes.
- Chapter 5 focuses on implementation of instruction with an emphasis on communication and complexity of instructional content by using appropriate questioning techniques and supporting active learning.
- Chapter 6 examines monitoring student progress and potential through discussing the importance of homework and applying findings of student learning outcomes, as well as responding to and meeting the individual needs of special populations within the classroom.

Within each chapter, information is organized into categories of characteristics or behaviors that are supported by the existing research as important aspects of teacher effectiveness. Summaries of research are provided in a straightforward manner in each chapter, with a list of key references to guide the interested reader to further information on the topics. Chapter 7 contains a brief conclusion on what an effective teacher is and how teacher effectiveness can be improved.

Part 2, the final section of the text, includes teacher skills assessment checklists, behaviors to look for in effective teacher performance, an annotated bibliography of selected sources, and a complete reference list. This portion of the book focuses on helping teachers improve—whether the improvement is self-diagnosed or the result of supervisor assistance. In particular, the checklists and qualities should be helpful in converting research findings into improved practice.

Uses for the Book

By closely aligning the attributes of high-quality teaching with curricula and assessments, we can be better equipped to identify links between classroom processes and desirable student outcomes. Thus, *Qualities of Effective Teachers* is aimed at improving the quality of teacher performance and learning opportunities for students. In this effort, the book can be a valuable resource for the following audiences:

- Teachers who desire to improve their own performance through analysis and reflective practice.

- Teacher leaders who are engaged in mentoring, peer coaching, and collaborative school-wide improvement.
- School administrators and department heads who supervise and evaluate teachers.
- Staff development specialists who plan and deliver training focused on improving instruction.
- Human resource specialists who are responsible for recruiting and selecting high-quality teacher applicants.
- Teacher and administrator educators who can employ the book's research synthesis in their teacher training and instructional leadership programs.
- Policy makers and their staffs who are responsible for developing tools and strategies for state or district teacher development and evaluation processes.

Each group contributes to the education of students and has a vested interest in their success.

Key references: Archer, 1998; Cawelti, 1999a; Cotton, 1999, 2000; Cruickshank & Haefele, 2001; Darling-Hammond, 2000; National Board for Professional Teaching Standards (NBPTS), no date; Olson, 1997; Stronge & Tucker, 2000; Wright, Horn, & Sanders, 1997

PART 1

What It Means To Be an Effective Teacher

Part 1 of *Qualities of Effective Teachers* focuses on the research useful in developing a profile of an effective teacher. Following the Introduction, the first six chapters of the book address major categories of teacher effectiveness. The first two chapters explore the teacher as an individual and as a professional; chapters 3 through 6 focus more specifically on aspects of a teacher's job responsibilities and practices. Chapter 7 contains a brief conclusion on what an effective teacher is and how teacher effectiveness can be improved.

1

Prerequisites of Effective Teaching

> *During the time observed, the students moved from desks to group to sustained silent reading on the carpet. The teacher gave all students work to do at their desks focusing on English skills that related to the social studies theme of the Wild West. During the small group instruction on dictionary skills, the students used their guide words to look up unfamiliar Wild West terms, with the students having a choice as to which words they would look up. Depending on the skill level of the group, the complexity of the words differed. Then, the teacher coached the students in a soft and nurturing tone. During a post-observation meeting, the teacher shared that she had been a classroom teacher for three years and worked as a teaching assistant for two years while earning a master's degree in Early Childhood Education with elementary teaching certification.*
>
> *NOTES FROM CLASSROOM OBSERVATION*
> *OF 3RD GRADE TEACHER*

A major educational debate today concerns how to recruit and prepare teachers. Many educators, policymakers, and taxpayers question whether traditional preservice programs prepare teachers who can maintain excellent instructional programs that increase student achievement. Alternative programs for recruiting and preparing teachers have been devised, giving rise to research comparing the effectiveness of teachers from different types of preparation backgrounds. Beyond the issue of pedagogical preparation, the question of content knowledge and its relevance to effective teaching remains a legitimate concern.

This chapter explores the research on teacher preparation and reviews what has been learned through extensive studies and research regarding the background of effective teachers. Each section of the chapter summarizes research findings related to a specific aspect of a teacher's background, with a list of key references related to that topic. Figure 1.1, located at the end of the chapter, summarizes the relationships among each of the background aspects described in the chapter and provides the related references.

Verbal Ability and Effective Teaching

Does the teacher's intellectual ability or aptitude translate into improved effectiveness in the classroom? Over several decades researchers have investigated relationships between teacher ability, as demonstrated through teacher's scores on aptitude tests such as the SAT (Scholastic Assessment Tests) or GRE (Graduate Record Exam), and the achievement of students. The results of such studies have been mixed. Some show no relationship beyond the level of basic skills knowledge. However, other studies have shown connections, particularly linking teachers' verbal ability with their students' performance.

While research generally has not supported a link between the teacher's intellectual aptitude and student success, one key finding has emerged: students taught by teachers with greater verbal ability learn more than those taught by teachers with lower verbal ability. Thus, a discernable link exists between the effective teacher's vocabulary and verbal skills and student academic success. Since communication skills are a part of verbal ability, effective teachers with higher verbal abilities can better convey ideas to students and communicate with them in a clear and compelling manner.

The following conclusions can be drawn from the research:

- Teachers' scores on verbal ability tests were the only input found to have a direct positive relationship with student achievement.
- Students taught by teachers with high verbal skills perform better on standardized tests than those students taught by teachers with lower verbal ability.
- A positive relationship exists between teachers with high verbal ability and student achievement.
- General intellectual aptitude has not typically been linked to higher student achievement; however, when teachers perform well on basic skills tests, their students also tend to do better on academic measures.

Key references: Darling-Hammond, 2000; Darling-Hammond, 2001; Hanushek, 1971; Haycock, 2000; Murnane, 1985; National Center for Educational Statistics, 1992; Rowan, Chiang, & Miller, 1997; Summers & Wolfe, 1975; Thomas B. Fordham Foundation, 1999; Wenglinsky, 2000

Educational Coursework and Effective Teaching

Teacher preparation traditionally has included a series of courses focusing on child development, instructional and assessment techniques, and methods and materials related to specific content areas. However, in recent years, teacher preparation programs and their usefulness to the teaching field have been the source of considerable scrutiny. Some recommendations and programs for teacher certification have curbed traditional teacher training in favor of brief, more practical and focused preparation of individuals with subject area degrees and varying backgrounds, including those with military and business training.

Partly in response to these programs, several studies have focused on teacher effectiveness related to the amount and type of educational coursework in a teacher's preparation program. In addition to understanding how students learn and what and how they need to be taught, studies support the finding that fully prepared teachers with background knowledge of pedagogy are better able to recognize individual student needs and customize instruction to increase overall student achievement. Additionally, teachers with better professional preparation are able to provide students with more diverse opportunities to learn.

There is little research and evaluation on the long-term effects of alternatively prepared teachers, but studies indicate that they may have more difficulty in the classroom than traditionally prepared teachers. Teachers who are not formally prepared to teach know little about how children grow, learn, and develop, or about how to support learning differences. Teachers with little or no coursework in education consistently have difficulties in the areas of classroom management, curriculum development, student motivation, and specific teaching strategies. They are less able to anticipate student knowledge and potential difficulties or to plan and redirect the lesson to meet the individual needs of the students.

On the other hand, one strong predictor of teaching performance is the amount of coursework in education. Studies have consistently found positive effects of teachers' formal education training on supervisory ratings and student learning. In addition to educational coursework, content knowledge is important. For example, one study indicated that students' science achievement positively related to teachers' course-taking background in both education and science. Thus, we can have confidence that both content knowledge and pedagogical skills are vital aspects of teacher effectiveness.

The following points summarize important outcomes related to educational coursework in teacher preparation:

- A teacher's formal pedagogical preparation has been shown to have a positive effect on student achievement, especially in the areas of mathematics, science, and reading.
- The teachers who completed programs of study in education consistently perform better on state licensing exams than those teachers who did not attend a program of study in education.
- The more methods courses in a teacher's preparation program, the more likely the teacher is to emphasize conceptual understanding and hands-on learning techniques in the classroom.
- A teacher's subject matter expertise supports student learning up to a point, but educational coursework appears to have a substantive value-added influence on student achievement.
- A positive relationship exists between student achievement and how recently an experienced teacher took part in a professional development opportunity such as a conference, workshop, or graduate class.
- The teachers prepared in schools of education demonstrate stronger classroom management skills and can better relate content to the needs and interests of students.
- The ability to apply and integrate knowledge or skills to a particular population in a specific setting is the key characteristic of an effective teacher.

Key references: Ashton & Crocker, 1987; Blair, 2000; Darling-Hammond, 2000; Darling-Hammond, 2001; Druva & Anderson, 1983; Evertson, Hawley, & Zlotnik, 1985; Ferguson & Womack, 1993; Fetler, 1999; Hansen & Feldhusen, 1994; Hanushek, 1971; Holt-Reynolds, 1999; Mason, Schroeter, Combs, & Washington, 1992; Mathews, 1999; Miller, McKenna, & McKenna, 1998; Monk & King, 1994; Schalock, Schalock, & Myton, 1998; Scherer, 2001; Shellard & Protheroe, 2000; Southern Regional Education Board, 1999; Thomas B. Fordham Foundation, 1999; Wenglinsky, 2000; Wise, 2000

Teacher Certification and Effective Teaching

Another important and controversial issue related to educational preparation of teachers is licensure and certification. In most states, teacher certification status is related to educational background and to scores on some test of pedagogical or content knowledge, or both. However, alternative certification routes are becoming more common along with alternative recruitment and preparation programs. As with other elements of teacher background, the research findings on licensure and certification related to student achievement are mixed.

The research indicates that the number of well-qualified, certified teachers within the state is a consistent and significant predictor of student achievement in math and reading on standardized tests. Furthermore, one of the best predictors of low student performance in individual schools is the number of uncertified teachers in the building. However, anywhere from 10 to 30 percent of new public school teachers each year begin teaching without full certification. In addition, more than half of the schools in the United States have certified teachers who are teaching in content areas in which they are not certified.

One study indicated that this practice of out-of-field teaching actually harms the teacher, as well as the students. In fact, teaching a grade level or subject for which a teacher is not certified or has little training may convert a highly qualified and capable teacher into an ineffective one. Some studies concluded that uncertified teachers and out-of-field teachers achieve far less with students than teachers with proper, in-field certification.

Some important findings from research related to certification standards are

- Fully prepared and certified teachers have a greater impact on gains in student learning than do uncertified or provisionally certified teachers, especially with minority populations and in urban and rural settings.
- Teacher certification status and teaching within one's field are positively related to student outcomes.
- Teachers with certification of some kind (standard, alternative, or provisional) tend to have higher achieving students than teachers working without certification.
- Teachers certified within their field have significantly higher achievement rates among their students than teachers working out-of-field, especially in mathematics.
- Students of teachers who hold standard certification in their subjects score from 7 to 10 points higher on 12th grade math tests than students of teachers with probationary, emergency, or no certification.
- Some studies have demonstrated relationships between standard certification and teacher practices (e.g., hands-on learning, connections to student experiences). These teacher practices have themselves been found to be effective in supporting student

achievement, thus illustrating a possible indirect relationship between traditional certification and student achievement.

Key references: Darling-Hammond, 1996; Darling-Hammond, 2000; Darling-Hammond, 2001; Darling-Hammond, Berry, & Thoreson, 2001; Dozier & Bertotti, 2000; Evertson, Hawley, & Zlotnik, 1985; Ferguson & Womack, 1993; Fetler, 1999; Goldhaber & Brewer, 2000; Hawk, Coble, & Swanson, 1985; Ingersoll, 2001; Lilly, 1992; Mathews, 1999; Miller, McKenna, & McKenna, 1998; Scherer, 2001; Strauss & Sawyer, 1986; Wise, 2000

Content Knowledge and Effective Teaching

A teacher's knowledge of the content that is taught is another important issue that has been extensively investigated in the research on teacher effectiveness. Strong content knowledge consistently has been identified as an essential element among those who study effective teaching. Clearly, subject matter knowledge positively affects teaching performance, however, it is not sufficient in and of itself. Teacher training programs that emphasize content knowledge acquisition and neglect pedagogical coursework are less effective in preparing prospective teachers to teach today's students than programs that offer both content and pedagogical knowledge.

Studies surveying educational stakeholders about teacher effectiveness place high priority on competence in content knowledge. Teachers with subject matter knowledge are better able to go beyond the basic textbook content and involve students in meaningful discussions and student-directed activities. Some researchers argue that the definition of subject matter expertise must include the ability to convey and teach the content to others, as well as having an acute awareness of the concepts and ideas being taught. Additionally, a strong background in content and subject matter assists teachers in planning and organizing lessons that are sequential and interactive.

Investigations of the importance of teacher content knowledge have yielded the following results:

- Students perform better when their teachers have majored or minored in the subject area that they are teaching.
- Teachers with a major or minor in content area are associated with higher student achievement, especially in the areas of secondary science and mathematics.
- Students, teachers, principals, and school board members have all emphasized the importance of subject matter knowledge in describing effective teaching.

- The ability to convey the content to students in a way that they can grasp, use, and remember is important, but it is not necessarily related to additional knowledge or coursework in the content area.
- Content area preparation is positively related to student achievement within specific subjects, especially in mathematics and science.
- Several studies have illustrated that teachers with greater subject matter knowledge tend to ask higher-level questions, involve students in the lessons, and allow more student-directed activities.
- Inconsistent results have been reported relating teacher scores on subject matter tests to student achievement, raising questions as to how well such tests measure aspects of content knowledge that are important for effective teaching of that content.
- Unfortunately, approximately 23 percent of all secondary teachers (30 percent of math teachers) do not have even a minor in the field they teach.

Key references: Berliner, 1986; Blair, 2000; Brookhart & Loadman, 1992; Carlsen, 1987; Carlsen & Wilson, 1988; Covino & Iwanicki, 1996; Darling-Hammond, 1996; Darling-Hammond, 2000; Darling-Hammond, Berry, & Thoreson, 2001; Druva & Anderson, 1983; Ferguson & Womack, 1993; Fetler, 1999; Goldhaber & Brewer, 2000; Holt-Reynolds, 1999; Johnson, 1997; Mitchell, 1998; Monk & King, 1994; National Association of Secondary School Principals (NASSP), 1997; NBPTS, no date; Peart & Campbell, 1999; Rowan, Chiang, & Miller, 1997; Shellard & Protheroe, 2000; Shulman, 1987; Traina, 1999; Wenglinsky, 2000

Teaching Experience and Teacher Effectiveness

Teaching experience matters in teacher effectiveness and student achievement, at least to a certain point. Experienced teachers differ from rookie teachers in that they have attained expertise through real-life experiences, classroom practice, and time. These teachers typically have a greater repertoire from which to incorporate and organize routines for monitoring students and creating flowing, meaningful lessons. Teachers who are both experienced and effective are experts who know the content and students they teach, use efficient planning strategies, practice interactive decision-making, and embody effective classroom management skills. These experienced and effective teachers are efficient—they can do more in less time than novice educators.

Researchers indicate that teachers develop from novices to masters at different intervals over time, taking from five to eight years to master the art, science, and craft of teaching. Therefore, the number of years in front of a classroom of students may not necessarily indicate that a teacher is expert. One study suggests that in order for a teacher to be considered experienced, the ability to apply the "book knowledge" from preservice training to both common and exceptional classroom situations should be observable. Through experience and awareness, teachers are able to improvise. Flexibility and adaptability are sometimes better than a well-written lesson plan because classrooms are dynamic. Novice teachers often hesitate to deviate from a plan, but the effective teacher can do it with ease and therefore capitalize on a teachable moment and accommodate a schedule change. The ability to improvise is a characteristic more common to experienced educators than to beginners.

Research supports the following findings related to teacher experience:

- Teachers with more experience tend to show better planning skills, including a more hierarchical and organized structure in the presentation of their material.
- Effective experienced teachers are better able to apply a range of teaching strategies, and they demonstrate more depth and differentiation in learning activities.
- Experienced teachers tend to know and understand their students' learning needs, learning styles, prerequisite skills, and interests better than beginners.
- The classrooms of more experienced teachers are better organized around routines and plans for handling problems than those of novices.
- Teaching experience has up to a 30 percent beneficial effect on student academic performance.
- Teachers with more than three years of experience are more effective than those with three years or fewer, but these differences seem to level off after five to eight years. Teacher expertise as defined by experience (as well as education and scores on licensing exams) accounts for as much as 40 percent of the variation in students' achievement.

Key references: Covino & Iwanicki, 1996; Cruickshank & Haefele, 2001; Darling-Hammond, 2000; Education Review Office, 1998; Fetler, 1999; Haycock, 2000; Kerrins & Cushing, 1998; Neilsen, 1999; Scherer, 2001; Tell, 2001; Virshup, 1997

Figure 1.1
Key References: Prerequisites of Effective Teaching

Reference	Verbal Ability	Knowledge of Teaching & Learning	Certification Status	Content Knowledge	Teaching Experience
Ashton & Crocker, 1987		●			
Berliner, 1986				●	
Blair, 2000		●			
Brookhart & Loadman, 1992				●	
Carlsen, 1987				●	
Carlsen & Wilson, 1988				●	
Covino & Iwanicki, 1996				●	●
Cruickshank & Haefele, 2001					●
Darling-Hammond, 1996			●	●	
Darling-Hammond, 2000			●	●	
Darling-Hammond, 2001	●	●	●	●	●
Darling-Hammond, Berry, & Thoreson, 2001			●	●	
Dozier & Bertotti, 2000			●		
Druva & Anderson, 1983		●		●	
Educational Review Office, 1998					●
Evertson, Hawley, & Zlotnik, 1985		●	●		
Ferguson & Womack, 1993		●	●	●	
Fetler, 1999		●	●	●	●
Goldhaber & Brewer, 2000			●	●	
Hansen & Feldhusen, 1994		●			
Hanushek, 1971	●	●			
Hawk, Coble, & Swanson, 1985			●		
Haycock, 2000	●				●
Holt-Reynolds, 1999		●		●	
Ingersoll, 2001			●		
Johnson, 1997				●	

Figure 1.1 *continued*
Key References: Prerequisites of Effective Teaching

Reference	**Verbal Ability**	**Knowledge of Teaching & Learning**	**Certification Status**	**Content Knowledge**	**Teaching Experience**
Kerrins & Cushing, 1998					●
Lilly, 1992			●		
Mason, Schroeter, Combs, & Washington, 1992		●			
Mathews, 1999		●	●		
Miller, McKenna, & McKenna, 1998		●	●		
Mitchell, 1998				●	
Monk & King, 1994		●		●	
Murnane, 1985	●				
National Association of Secondary School Principals, 1997				●	
National Board for Professional Teaching Standards, no date				●	
National Center for Educational Statistics, 1992	●				
Neilsen, 1999					●
Peart & Campbell, 1999				●	
Rowan, Chiang, & Miller, 1997	●			●	
Schalock, Schalock, & Myton, 1998		●			
Scherer, 2001		●	●		●
Shellard & Protheroe, 2000		●		●	
Shulman, 1987				●	
Southern Regional Education Board, 1999		●			
Strauss & Sawyer, 1986			●		
Summers & Wolfe, 1975	●				
Tell, 2001		●			
Thomas B. Fordham Foundation, 1999	●	●			
Traina, 1999				●	
Virshup, 1997					●
Wenglinsky, 2000	●	●		●	
Wise, 2000		●	●		

2

The Teacher as a Person

I just wanted to write you a little thank you note for everything that you have done for me over the past two years. I have learned a lot and had a whole lotta fun doing it. I loved the labs, and basically everything we did in your class because you made it fun. You made it so we learned without even realizing we were learning anything, but when it came time to show that we knew it, we were like, "Whoa! I guess I really did learn something!" Not only did you teach us about science, you put us in real case scenarios and helped prepare us for high school and even college. But even further than that, you were like a friend to me. That might scare you a little, but you really remind me of myself, and I hope I grow up to be at least a little like you. I feel like you genuinely care about your students and sincerely enjoy your job . . . Thank you for being such a great teacher and friend. You have sincerely contributed to the "awesomeness" of these years. Thanks 1,000 times!

STUDENT LETTER TO A MIDDLE SCHOOL SCIENCE TEACHER
WITH FOUR YEARS OF TEACHING EXPERIENCE

Much of the recent research on teacher effectiveness focuses on relating teacher behaviors to student achievement. Quite a bit of the research, however, has delved into stakeholders' perceptions of good teaching—what students, administrators, and teachers themselves think makes an effective teacher. Studies suggest that instructional and management processes are key to effectiveness, but many interview and survey responses about effective teaching emphasize the teacher's affective characteristics, or social and emotional behaviors, more than pedagogical practice.

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Moreover, the teacher's psychological influence on students has been linked to student achievement in various effectiveness studies. This chapter explores what we know about teachers' affective characteristics as they relate to effectiveness and to perceptions of effectiveness. Figure 2.1, at the end of the chapter, lists the major characteristics with key references for additional reading.

Role of Caring

Effective teachers care about their students and demonstrate that they care in such a way that their students are aware of it, as we see in the classroom example at the beginning of this chapter. Several studies exploring what makes a good teacher show the importance of caring in the eyes of teachers and students. Also, supervisors who rate teachers place priority on how teachers show students that they are caring and supportive.

Caring is a broad term, maybe as broad as effectiveness itself. One study defines caring as an act of bringing out the best in students through affirmation and encouragement. Obviously, the characteristics of caring go well beyond knowing the students to include qualities such as patience, trust, honesty, and courage. Specific teacher attributes that show caring include listening, gentleness, understanding, knowledge of students as individuals, warmth and encouragement, and an overall love for children.

Listening

Effective teachers practice focused and sympathetic listening to show students they care not only about what happens in the classroom, but about students' lives in general. These teachers initiate two-way communication that exudes trust, tact, honesty, humility, and care. In the act of listening, these teachers actually pay attention to and understand what the students say. They are dedicated to bettering student lives and demonstrate their understanding through tenderness, patience, and gentleness. Moreover, research indicates that children want to be nurtured, and they value teachers who are kind, gentle, and encouraging. Particularly for elementary students, gentleness in a teacher is a sign of caring and an important element in perceived effectiveness.

Understanding

Students highly value teachers' understanding of their concerns and questions. Interviews with students consistently reveal that students want teachers who listen to their arguments and assist them in working out their problems. They want teachers who hold them in mutual respect and who are willing to talk about their own personal lives and experiences. Through appropriate self-disclosure, teachers become human in the eyes of students. Being available to students, and the depth of the teacher's understanding of students, legitimizes the teacher as a person when demonstrating genuine concern and empathy toward students.

Knowing Students

Effective, caring teachers know students both formally and informally. They use every opportunity at school and in the community to keep the lines of communication open. Many educational stakeholders emphasize that effective teachers know their students individually, not only understanding each student's learning style and needs, but also understanding the student's personality, likes and dislikes, and personal situations that may affect behavior and performance in school. Effective teachers care for the student first as a person, and second as a student. They respect each student as an individual.

Research on caring teachers yields the following important points:

- Caring teachers who know their students create relationships that enhance the learning process.
- Effective teachers consistently emphasize their love for children as one key element of their success.
- Teachers who create a supportive and warm classroom climate tend to be more effective with all students.
- Caring teachers are intentionally aware of student cultures outside the school.
- Caring teachers truly believe that each student has a right to a caring and competent teacher.
- Caring teachers appropriately respect confidentiality issues when dealing with students.
- Caring teachers regard the ethic of care and learning as important in educating students to their full potential.

Key references: Bain & Jacobs, 1990; Brophy & Good, 1986; Collinson, Killeavy, & Stephenson, 1999; Cotton, 1999; Cotton, 2000; Cruickshank & Haefele, 2001; Emmer, Evertson, & Anderson, 1980; Good & Brophy, 1997; Johnson, 1997; National Association of Secondary School Principals, 1997; Peart & Campbell, 1999; Thomas & Montomery, 1998; Wang, Haertel, & Walberg, 1993a; Wang, Haertel, & Walberg, 1993b; Yamaguchi, Strawser, & Higgins, 1997

Role of Fairness and Respect

Beyond a demonstration of caring, an effective teacher establishes rapport and credibility with students by emphasizing, modeling, and practicing fairness and respect. Respect and equity are identified as the prerequisites of effective teaching in the eyes of students. In fact, students interviewed for their views on effective teachers consistently note the importance of fairness and respect at all levels of schooling—from elementary through high school.

The elements of fairness and respect are highlighted in many studies. Students stated that effective teachers respond to misbehavior at an individual level rather than holding a whole class responsible for the actions of one student or a small group of students. They know and understand the facts before responding to any disciplinary situation, and then tell students specifically what they did wrong. Moreover, they tell students what they need to do right. Furthermore, students expect teachers to treat them equitably—when they behave as well as misbehave—and to avoid demonstrations of favoritism.

Effective teachers continually demonstrate respect and understanding, along with fairness regarding race, cultural background, and gender. Students' perceptions of teacher effectiveness emphasize racial impartiality with equitable treatment of all students. The students expect teachers not to allow ethnicity to affect their treatment or expectations of students.

Interviews and surveys of perceptions of fairness in the classroom indicate the following key points:

- Students associate respect with fairness and expect teachers to treat them as people.
- Students perceive effective teachers as those who avoid using ridicule and who prevent situations in which students lose respect in front of their peers.
- Effective teachers practice gender, racial, and ethnic fairness.
- Students associate fairness and respect with a teacher being consistent and providing opportunities for students to have input into the classroom.
- Effective teachers offer all students opportunities to participate and to succeed.

Key references: Collinson, Killeavy, & Stephenson, 1999; Cotton, 1999; Cotton, 2000; Emmer, Evertson, & Anderson, 1980; Good & Brophy, 1997; McBer, 2000; National Association of Secondary School Principals, 1997; Peart & Campbell, 1999; Thomas & Montomery, 1998; Yamaguchi, Strawser, & Higgins, 1997

Social Interactions with Students

Teachers and students spend much of their day interacting academically. However, social interactions and those that give the teacher opportunities to demonstrate caring, fairness, and respect have been shown to be an important element of teacher effectiveness. A teacher's ability to relate to students and to make positive, caring connections with them plays a significant role in cultivating a positive learning environment and promoting student achievement.

Effective teachers use a wide variety of strategies to interact with students. However, the basis for these interactions goes beyond the four walls of the classroom. In fact, students revealed that effective teachers demonstrate interest in students' lives beyond the classroom. Teachers who attend sporting events, concerts, and other special programs in which their students participate are valued by their students. Additionally, researchers contend that constructive social interactions between teachers and students not only contribute to student learning and achievement, but also increase student self-esteem by fostering feelings of belonging to the classroom and the school.

Teachers who are aware of their own style of interacting with their students are able to provide a more favorable learning environment for all students. Through social interactions with students, effective teachers are able to individually, realistically, and successfully challenge each and every student to succeed.

Aspects of effective teaching related to social interaction involve the following:

- Effective teachers consistently behave in a friendly and personal manner while maintaining appropriate teacher-student role structure.
- Effective teachers work *with* students as opposed to doing things *to* or *for* them.
- Productive interactions involve giving students responsibility and respect; also treating secondary students as adults when appropriate.
- Teachers who are considered effective allow students to participate in decision making.
- Effective teachers pay attention to what students have to say.
- Students indicate that effective teachers spend more time interacting and working directly with them than ineffective teachers.
- When interacting with students, effective teachers demonstrate a sense of fun and a willingness to play or participate.
- Effective teachers have a good sense of humor and are willing to share jokes.

Key references: Bain & Jacobs, 1990; Bloom, 1984; Brookhart & Loadman, 1992; Collinson, Killeavy, & Stephenson, 1999; Cotton, 1999; Cotton, 2000; Cruickshank & Haefele, 2001; Darling-Hammond, 2001; Education USA Special Report, no date; Good & Brophy, 1997; Johnson, 1997; Kohn, 1996; National Association of Secondary School Principals, 1997; Peart & Campbell, 1999; Porter & Brophy, 1988; Thomas & Montomery, 1998; Wang, Haertel, & Walberg, 1993a; Wang, Haertel, & Walberg, 1993b; Yamaguchi, Strawser, & Higgins, 1997

Promotion of Enthusiasm and Motivation for Learning

The teacher's enthusiasm for teaching, learning, and for the subject matter has been shown to be an important part of effective teaching, both in supporting positive relationships with students and in encouraging student achievement. Based on student interviews, teachers can effectively motivate most students by encouraging them to be responsible for their own learning, maintaining an organized classroom environment, setting high standards, assigning appropriate challenges, and providing reinforcement and encouragement during tasks. These students see effective teachers as motivational leaders.

Research indicates that effective teachers have residual positive effects on their students' willingness to work to their potential and beyond. Consequently, less effective teachers may actually extinguish students' interest in the subject. Good teachers realize and deal with the fact that some students prefer to sit quietly on the sideline; however, they do not stop involving them.

By finding a way to motivate a student to learn, a teacher contributes to a student's evolving attitude toward a particular subject or activity. In other words, the teacher can bring out the best in that student. An effective teacher recognizes that students vary in their motivation levels. An effective teacher knows how to support intrinsically motivated students and seeks ways to provide extrinsic motivation to students who need it. Motivating students consists of making students receptive to and excited about learning, as well as making them aware of the importance and value of learning itself. By establishing positive attitudes and perceptions about learning, the effective teacher makes the learner feel comfortable in the classroom. As a particular example of establishing positive attitudes, teachers who provide mastery learning techniques for their students improve the attitudes of their students. They also increase academic self-concept, interest in the subject area, and the desire to learn more about the subject. Emphasizing higher mental processes along with mastery learning strategies tends to create a learning environment that is exciting and constantly new and playful.

Researchers have investigated the influence of teacher enthusiasm on student motivation and learning, with the following results and conclusions:

- High levels of motivation in teachers relate to high levels of achievement in students.
- Teachers' enthusiasm for learning and for the subject matter under study has been shown to be an important factor in student motivation, which is closely linked to student achievement.
- A teacher's involvement in graduate studies, which indicates enthusiasm for learning, may be a source of motivation and may translate into higher achievement among students.
- Some studies indicate that the enthusiasm factor is more significant with older students than younger ones, but effective primary teachers also have demonstrated enthusiasm for their work as part of their overall effectiveness.

Key references: Bain & Jacobs, 1990; Bloom, 1984; Brophy & Good, 1986; Collinson, Killeavy, & Stephenson, 1999; Covino & Iwanicki, 1996; Darling-Hammond, 2000; Johnson, 1997; Marzano, Pickering, & McTighe, 1993; Monk & King, 1994; Palmer, 1990; Peart & Campbell, 1999; Rowan, Chiang, & Miller, 1997; Wang, Haertel, & Walberg, 1993a; Wang, Haertel, & Walberg, 1993b

Attitude Toward the Teaching Profession

An important facet of professionalism and of effectiveness in the classroom is a teacher's dedication to students and to the job of teaching. Through examination of several sources of evidence, a dual commitment to student learning and to personal learning has been found repeatedly in effective teachers. A common belief among effective teachers, which reveals their dual commitment, is that it is up to them to provide a multitude of tactics to reach students. In essence, effective teachers view themselves as responsible for the success of their students.

The effective teacher truly believes that all students can learn—it is not just a slogan. These teachers also believe that they must know their students, their subject, and themselves, while continuing to account for the fact that students learn differently. Through differentiation of instruction, effective teachers reach their students and together they enjoy their successes.

Effective teachers also work collaboratively with other staff members. They are willing to share their ideas and assist other teachers with difficulties. Collaborative environments create positive working relationships and help retain teachers. Additionally, effective teachers volunteer to lead work teams and to be mentors to new teachers. Effective teachers are informal leaders on the cutting edge of reform and are not afraid to take risks to improve education for all students. These informal leaders are the ones administrators typically call on for opinions and help in effecting change.

Effective teachers invest in their own education. They model to their students that education and learning are valuable by taking classes and participating in professional development, conferences, and inservice training. Additionally, they discuss their participation in these activities with students in a positive manner. Effective teachers learn and grow as they expect their students to learn and grow. They serve as powerful examples of lifelong learners as they find ways to develop professionally.

The relationship between teachers' attitudes and effectiveness can be summarized:

- Effective teachers exude positive attitudes about life and teaching.
- Extra hours spent preparing and reflecting upon instruction are well worth the student outcomes—specifically achievement.
- Promoting and participating in a collegial, collaborative work environment results in more positive attitudes in teachers.
- Effective teachers do not make excuses for student outcomes; they hold their students responsible while also accepting responsibility themselves.

Key references: Bain & Jacobs, 1990; Blair, 2000; Brookhart & Loadman, 1992; Cawelti, 1999b; Covino & Iwanicki, 1996; McBer, 2000; Mitchell, 1998; National Board for Professional Teaching Standards, no date; Porter & Brophy, 1988; Rowan, Chiang, & Miller, 1997; Thomas & Montomery, 1998; Virshup, 1997; Wong & Wong, 1998

Role of Reflective Practice

Another element of professionalism often cited as part of effective teaching is a teacher's reflective practice, or careful review of and thoughtfulness about one's own teaching process. The role of reflection has been described repeatedly in studies of teacher effectiveness. Those studies include interviews and surveys of teachers judged effective according to their students' achievement rates, studies of teachers certified under the National Board of Professional Teaching Standards, and case studies of effective schools. Effective teachers continuously practice self-evaluation and self-critique as learning tools. Reflective teachers portray themselves as students of learning. They are curious about the art and science of teaching and about themselves as effective teachers. They constantly improve lessons, think about how to reach particular children, and seek and try out new approaches in the classroom to better meet the needs of their learners.

Some researchers define reflective teachers as introspective. They seek a greater understanding of teaching through scholarly study and professional reading. Through reflective practice, effective teachers monitor their teaching because they want to be better teachers and to make a difference in the lives of students.

Effective teachers are not afraid of feedback; in fact, they elicit information and criticism from others. Additionally, in the interest of improving their ability to have a positive impact on student learning, these teachers readily accept constructive criticism and reflect upon it. Reflective practice can initially result in confusion for the teacher; the process requires open-mindedness, honesty, and sufficient time to change teaching behaviors.

Thoughtful questions generated by research can guide teachers in reflecting on practice. Effective teachers realize that reflective practices are more than simply preservice or inservice exercises. Indeed, reflective practices are crucial to lifelong learning and a professional necessity.

Thoughtful reflection translates into enhanced teacher efficacy. And a teacher's sense of efficacy has an impact on how she approaches instructional content and students. While efficacy does change for teachers as they encounter new experiences, such as materials and grade levels, they are more likely to have additional positive experiences as they reflect on these new experiences. Educators' confidence in their ability to facilitate the learning and understanding of material by students is observable by others. In particular, when teachers are confident, they communicate the belief of their own efficacy to students.

Additional findings on the value of reflective practices include the following:

- Effective teachers may reflect on their work formally or informally; for example, they may review a day's work mentally, keep a journal or portfolio, meet regularly with a mentor or with colleagues, or assess a videotaped recording of their teaching. Regardless of the mode, the key is reflection.
- Teachers whose students have high achievement rates continually mention reflection on their work as an important part of improving their teaching.
- Belief in one's efficacy and maintaining high expectations for students are common among teachers who reflect.

Key references: Collinson, Killeavy, & Stephenson, 1999; Covino & Iwanicki, 1996; Cruickshank & Haefele, 2001; Demmon-Berger, 1986; Good & Brophy, 1997; Mitchell, 1998; National Board for Professional Teaching Standards, no date; Thomas & Montomery, 1998

Figure 2.1
Key References: The Teacher as a Person

Reference	Caring	Fairness & Respect	Interactions with Students	Enthusiasm & Motivation	Attitude Toward Teaching	Reflective Practice
Bain & Jacobs, 1990	○		○	○	○	
Blair, 2000					○	
Bloom, 1984			○	○		
Brookhart & Loadman, 1992			○		○	
Brophy & Good, 1986	○			○		
Cawelti, 1999b					○	
Collinson, Killeavy, & Stephenson, 1999	○	○	○	○		○
Cotton, 1999	○	○	○			
Cotton, 2000	○	○	○			
Covino & Iwanicki, 1996				○	○	○
Cruickshank & Haefele, 2001	○		○			○
Darling-Hammond, 2000				○		
Darling-Hammond, 2001			○			
Demmon-Berger, 1986						○
Education USA Special Report, no date			○			
Emmer, Evertson, & Anderson, 1980	○	○				
Good & Brophy, 1997	○	○	○			○
Johnson, 1997	○		○	○		
Kohn, 1996			○			
Marzano, Pickering, & McTighe, 1993				○		
McBer, 2000		○			○	
Mitchell, 1998					○	○
Monk & King, 1994				○		
National Association of Secondary School Principals, 1997	○	○	○			

Figure 2.1 *continued*
Key References: The Teacher as a Person

Reference	Caring	Fairness & Respect	Interactions with Students	Enthusiasm & Motivation	Attitude Toward Teaching	Reflective Practice
National Board for Professional Teaching Standards, no date					○	○
Palmer, 1990				○		
Peart & Campbell, 1999	○	○	○	○		
Porter & Brophy, 1988			○		○	
Rowan, Chiang, & Miller, 1997				○	○	
Thomas & Montomery, 1998	○	○	○		○	○
Virshup, 1997					○	
Wang, Haertel, & Walberg, 1993a, 1993b	○		○	○		
Wong & Wong, 1998					○	
Yamaguchi, Strawser, & Higgins, 1997	○	○	○			

3

Classroom Management and Organization

Before class began, the teacher walked around the room, laying the graded work from a previous class session face down on the students' desks. When the students walked into the room, they looked at the assignment that had been returned, and immediately copied down the daily objective and homework assignment before beginning the math starter, a problem on the board. If a student needed a calculator, ruler, or other materials, the student simply went to where the materials were stored and got what was needed. The teacher circulated around the room and within a few minutes began class by asking students to explain their approach and solution to a partner or triad. They moved into this formation, conferred, and then volunteered to share with the class. Then the teacher moved on to addressing questions about the graded assignment before introducing a new mathematical concept. The whole process of getting the students into the room, settled, and focused on the starter and going over the graded work lasted about fifteen minutes and the teacher used additional routines to maximize the remaining forty minutes of the class period.

ALGEBRA AND GEOMETRY TEACHER WITH 27 YEARS OF EXPERIENCE

An effective teacher plans and prepares for the organization of the classroom with the same care and precision used to design a high-quality lesson. In a symphony, the conductor manages the various sections to produce a harmonious sound, much like the teacher conducts the components of a classroom to create the buzz of students engaged in learning. Components of the organizational plan of a classroom include room arrangement, discipline, the creation of routines, and a plan to teach the students how their learning environment is organized. To the extent possible, effective teachers envision what is needed to make the classroom run smoothly. A key difference between beginning and experienced educators is that the novice tends to leap into the content the first week of school, while the senior teacher works on creating a positive classroom climate and then works academics into that objective.

The effective teacher is not just someone who knows how to support student learning through instructional techniques, strong curricular materials, and rapport with the class. The effective teacher must create an overall environment conducive to learning. Orchestrating this supportive learning environment requires that a teacher practice skills in classroom organization and management. It also requires consistency in behavioral expectations and responses. The effective educator attends to these elements in a proactive way to establish a positive classroom climate oriented toward learning, much as a symphony conductor attends to many elements in performing a musical masterpiece. Figure 3.1 at the end of this chapter summarizes specific elements of the effective learning environment and links these elements to key references.

Using Classroom Management Skills

Successful classroom management involves much more than rules and discipline. Indeed, research into classroom management demonstrates that effective teachers are those who are proactive about student behavior, involving students in the process of establishing and maintaining rules and routines. Doyle (1986) defined management as "the actions and strategies teachers use to solve the problem of order in classrooms" (p. 397), rather than responses to disciplinary situations. Effective teachers establish responses to common classroom issues of order that allow them to focus maximum time and energy on the instructional process. When teachers make the classroom experience engaging, there is little time or inclination for students to misbehave.

Effective classroom managers are thoroughly prepared and keep their students actively involved in the teaching and learning process. The primary ingredient here for teacher effectiveness is readiness. Effective teachers are prepared for students on a daily basis, from the very first day of school to the very last. Creating a productive classroom environment includes practical planning, such as developing functional floor plans with teacher and student work areas, wall spaces, and furniture placed within the classroom for optimal benefit. Some studies also include self-preparation, both physical and attitudinal, as a key contributor to the organizational process. Classroom managers who are prepared for the ups and downs of the instructional day work to create a setting that responds to the ebb and flow of the students. A positive attitude conveys this preparedness to students.

In addition to arranging the physical setting, effective teachers establish and actively teach rules and procedures at the beginning of the school year and rehearse them in the context in which they will be applied. They consistently and fairly enforce the rules for all students. Good classroom managers are effective monitors of students, as well. These teachers are keen observers of student behaviors and adept at discerning and addressing potential disruptions. Over and over again, the term "with-it-ness," meaning awareness of surroundings, is used to describe teachers who are effective classroom managers. Moreover, effective teachers who are aware of student behaviors have a tendency to be near problems when they erupt, and so can quell them quickly.

Many studies show that classroom management is an influential variable in teacher effectiveness. Explorations of student achievement, surveys of perceptions, and meta-analyses on a range of studies have all supported the notion that effective management is a key component of effective teaching. Elements of effective classroom management include establishing routines and procedures to limit disruption and time taken away from teaching and learning, maintaining momentum and variety in instructional practices, and monitoring and responding to student activity.

Research findings on the classroom management skills of effective teachers consistently outline the following elements:

- Consistent, proactive discipline is the crux of effective classroom management.
- Effective teachers establish routines for all daily tasks and needs.
- Effective classroom managers orchestrate smooth transitions and continuity of momentum throughout the day.
- Effective teachers and classroom managers strike a balance between variety and challenge in student activities.
- Effective classroom managers can multitask.
- Effective educators have a heightened awareness of all actions and activities in the classroom.
- Classroom management skills include the use of space and proximity or movement around the classroom for nearness to trouble spots and to encourage attention.
- Anticipation of potential problems by effective teachers is a means to limit disruption.

- Effective classroom teachers resolve minor inattention and disruption before they become major disruptions.
- Effective classroom managers are able to increase student engagement in learning and make good use of every instructional moment.
- Effective teachers seem to have eyes in the backs of their heads.

Key references: Bain & Jacobs, 1990; Berliner, 1986; Brophy & Good, 1986; Cotton, 1999; Cotton, 2000; Covino & Iwanicki, 1996; Demmon-Berger, 1986; Doyle, 1986; Education USA Special Report, no date; Emmer, Evertson, & Anderson, 1980; Good & Brophy, 1997; Good & McCaslin, 1992; Johnson, 1997; Kounin, 1970; Peart & Campbell, 1999; Shellard & Protheroe, 2000; Teddlie & Stringfield, 1993; Wang, Haertel, & Walberg, 1993a; Wang, Haertel, & Walberg, 1993b; Wong & Wong, 1998; Yamaguchi, Strawser, & Higgins, 1997

Applying Elements of Organization

Organizational skills deserve special attention in our discussion of effective classroom management and its role in effective teaching. The teacher who is organized in terms of routines, behaviors, and materials typically is better prepared for class and sets an example of organization for students that supports their organization for learning. Emphasis on organization has been shown to contribute to effective teaching by freeing up as much as an extra hour per week from administrative or lost time that can be used as instructional time.

Most effective teachers admit that rules, procedures, and routines take precedence over academic lessons during the first week of school, noting that organization takes a considerable investment of time at first; however, it has tremendous payback benefits. When materials are organized, it allows for smooth transitions between activities and increases the amount of time on academic tasks. Consequently, as students focus on academic engagement, the potential for behavior problems to occur is greatly reduced.

Organized classrooms are easy to recognize. Instructors in well-organized classrooms prepare effective working environments by optimizing proximity to materials and students. Routines and procedures are established so that the classrooms seem to run automatically. Students know exactly what to do and when to do it. This orchestrated level of organization allows effective teachers to provide differentiated instruction when it is needed.

Good classroom organization is achieved in a variety of ways. One elementary school example is the use of color-coding to assist a teacher or student in quickly locating materials. If multiple preparations are required of a teacher, color-coding bins or folders (one color per subject) can optimize organization. Placing commonly used materials such as scissors, staplers, tape, hole punches, and crayons in easily accessible places for students saves the teacher from being the sole distributor of the resources. Dish tubs may be used to organize the materials needed for a hands-on activity and should be prepared in advance to save class time. A secondary school example is when science educators designate students to serve as laboratory assistants who help prepare for lab work. In elementary school, the assignment of classroom jobs encourages responsibility as students serve as line leaders and paper collectors on a rotating basis. Using a combination of strategies to organize the classroom can allow more class time to be allocated for instruction.

Taking the time to set up procedures for routine tasks in a classroom enables the teacher to cue students to perform them with a minimal amount of explanation. Training, feedback, and praise, however, are needed to establish the routine. Just as kindergartners must be taught what to do when the fire drill sounds, procedures must be taught so that they become automatic responses. Once taught, the routines can be adapted if the situation arises, but the groundwork is laid for a well-orchestrated classroom.

Many studies summarize these key elements of organization:

- Teaching is best described as a juggling act in which the teacher is able to multitask (e.g., activities and classroom experiences).
- Handling of routine tasks is prompt and efficient by effective teachers.
- Having materials prepared and ready for use in advance of the lesson, including extra materials in case of unexpected problems or sudden arrival of new students, is a mark of an organized instructor.
- Creating and maintaining practical procedures allows teachers to support students in knowing what they are to do, when, with minimum repetition of directions.
- Communicating to students the organization of space and where necessary materials are to be stored is common among effective teachers.

Key references: Bain & Jacobs, 1990; Berendt & Koski, 1999; Brophy & Good, 1986; Cotton, 1999; Cotton, 2000; Covino & Iwanicki, 1996; Emmer, Evertson, & Anderson, 1980; Shellard & Protheroe, 2000; Wang, Haertel, & Walberg, 1993a; Wang, Haertel, & Walberg, 1993b; Wong & Wong, 1998

Managing and Responding to Student Behavior

One of the most important organizational skills an effective teacher possesses is the ability to prevent negative behavior. Studies indicate that the majority of behavior problems occur because students do not know or do not follow routines and procedures. This supports the notion that proactive classroom management is the most effective deterrent to discipline problems. Praising students, reinforcing positive behaviors, and establishing trust within the classroom builds respectful relationships between teachers and students. Disciplinary actions are rare in environments where teachers and students respect and trust each other.

The key to minimizing discipline problems is good classroom management skills. Effective teachers manage and attend to the needs of all students within the class. Unfortunately, classroom observation reports reveal that most teachers direct their attention and instruction more frequently to some students and ignore others. In the same sense, they provide more positive feedback to some while ignoring others. This type of teacher behavior increases the likelihood of student misbehavior. On the other hand, effective classroom managers are able to recognize cues from students and decide if a predetermined procedure or routine should be able to handle the behaviors. If no routine was established in advance, the teacher quickly adapts to handle the situation with little or no disruption to the other students.

Teachers who set and reinforce clear expectations for student behavior have more success in classroom control and fewer discipline problems than those who fail to do so. Establishing rules and procedures at the beginning of the school year and involving students in the process is one approach effective teachers use to ensure students recognize the importance of the students' role in the classroom. Effective teachers clearly communicate and reinforce behavioral expectations. When an expectation is not met, the educator addresses the concern, gives the student an opportunity to identify the issue, and provides ample examples of other choices that the student could have made. Additionally, the teacher assists students in understanding the logic behind the rules and the reasonableness of the consequences for breaking the rules, as well as the rewards for following them. These teachers link consequences to the behavior displayed by the student. They handle discipline issues on an individual basis as opposed to having class consequences for the actions of a few. For situations that are unfamiliar to students, the teacher provides instructions on how to behave. Parents and administrators are involved in supporting and enforcing effective teachers' well-prepared discipline plans. Finally, effective teachers truly believe that students have the capacity to learn self-discipline.

For students in early grades, the explicitness of rules and routines is most important; for students in later grades, clarity of expectations is a more important factor. Equally important as establishing behavioral expectations is the consistency teachers show in carrying out responses to the breaking of rules. Such consistent response and appropriate management helps effective teachers achieve lower levels of off-task student behaviors in their classrooms. Effective teachers also use discipline carefully to support management of the learning environment. Of the disciplinary situations that do arise, effective teachers are able to handle the majority of them within the classroom, without involving administrators. They realize that by reducing disciplinary problems within the classroom, they may be able to significantly increase overall student achievement. Essentially, the less disciplining that takes place, the more time there is for instruction; the more time there is for instruction, the more students learn.

Research on effective teachers' ability to efficiently manage student discipline consistently indicates the following:

- The effective teacher minimizes discipline time and accentuates instructional time.
- The time a teacher spends on disciplining students inversely affects student achievement outcomes.
- The effective teacher interprets and responds to inappropriate behaviors promptly.
- The effective teacher maintains clear rules and procedures, and establishes credibility with students through fair and consistent implementation of discipline.
- The effective teacher reinforces and reiterates the expectations for positive behavior.

Key references: Bain & Jacobs, 1990; Bloom, 1984; Brophy & Good, 1986; Cotton, 1999; Cotton, 2000; Covino & Iwanicki, 1996; Doyle, 1986; Education USA Special Report, no date; Emmer, Evertson, & Anderson, 1980; Good & Brophy, 1997; Hanushek, 1971; Shellard & Protheroe, 2000; Wang, Haertel, & Walberg, 1993a; Wang, Haertel, & Walberg, 1993b; Wong & Wong, 1998; Yamaguchi, Strawser, & Higgins, 1997

Figure 3.1
Key References: Classroom Management and Organization

Reference	Classroom Management	Key Elements of Organization	Disciplining Students
Bain & Jacobs, 1990	●	●	●
Berendt & Koski, 1999		●	
Berliner, 1986	●		
Bloom, 1984			●
Brophy & Good, 1986	●	●	●
Cotton, 1999	●	●	●
Cotton, 2000	●	●	●
Covino & Iwanicki, 1996	●	●	●
Demmon-Berger, 1986	●		
Doyle, 1986	●		●
Education USA Special Report, no date	●		●
Emmer, Evertson, & Anderson, 1980	●	●	●
Good & Brophy, 1997	●		●
Good & McCaslin, 1992	●		
Hanushek, 1971			●
Johnson, 1997	●		
Kounin, 1970	●		
Peart & Campbell, 1999	●		
Shellard & Protheroe, 2000	●	●	●
Teddlie & Stringfield, 1993	●		
Wang, Haertel, & Walberg, 1993a	●	●	●
Wang, Haertel, & Walberg, 1993b	●	●	●
Wong & Wong, 1998	●	●	●
Yamaguchi, Strawser, & Higgins, 1997	●		●

4

Organizing for Instruction

> *An electrical engineer turned middle school teacher believed that her students could learn advanced math concepts. She channeled her students' energy through expecting excellence, affirming that they could do it, and supporting them. She moved a below-grade-level mathematics group to on-grade level by teaching them pre-algebra concepts. She made it a class goal to go on to pre-algebra or algebra the following school year. This high-energy educator planned lessons that filled the gaps in the students' knowledge base while teaching them complex skills. She applied pre-algebra to the students' lives to make it accessible. She organized her instruction around the students' academic needs—meeting them where they were and taking them where she knew they could go.*
>
> MIDDLE SCHOOL TEACHER WITH 8 YEARS OF EXPERIENCE

Teaching is a complex activity that involves careful preparation and the planning of objectives and activities on an hourly, daily, and weekly basis. In addition, long-term planning ensures coverage of curriculum across a marking period, semester, and year. Further, effective educators demonstrate high expectations for students and select strategies to propel the students' learning. Beyond planning and preparation of materials, effective organizing for instruction also involves the development of a conscious orientation toward teaching and learning as the central focus of classroom activity. Teaching and learning as a focus must be consistently communicated to students in the classroom and to observers. This chapter explores elements of organizing and orienting for instruction that have been identified as part of effective teaching practice. Figure 4.1 at the end of this chapter outlines key references relating to these elements.

Focusing on Instruction

The effective teacher recognizes academic instruction as central to his role. This focus on instruction guides not only the teacher's own planning and classroom behavior, but also comes across clearly to students and represents *the* major element in a robust learning environment. A teacher may say to students, "It is my job to see that you succeed," or, "I want you to be prepared for life beyond the schoolhouse door." Although effective teachers believe that students must be challenged, they also realize the need for them to experience success. Several studies have emphasized the importance of a focus on high-quality instruction in supporting student achievement, including the following findings and conclusions:

- Effective teachers see consistency and organization in their classrooms as important because they allow the central focus of classroom time to be on teaching and learning.
- Effective teachers who consistently prioritize instruction and student learning as the central purposes of schooling communicate an enthusiasm and dedication to learning that students reflect in their own behavior and practice.
- Effective teachers reinforce their focus on instruction through their allocation of time to the teaching and learning process, and through their expectations for student learning.

Key references: Bain & Jacobs, 1990; Berendt & Koski, 1999; Berliner & Rosenshine, 1977; Brophy & Good, 1986; Cawelti, 1999b; Cotton, 1999; Cotton, 2000; Covino & Iwanicki, 1996; Holt-Reynolds, 1999; Molnar et al., 1999; Wang, Haertel, & Walberg, 1993a; Wang, Haertel, & Walberg, 1993b

Maximizing Instructional Time

Time is one of the most challenging constraints a teacher faces in trying to achieve curricular goals and meet the needs of all students, while managing the administrative tasks that are a necessary responsibility of the job. Nonetheless, effective teachers do manage to maximize instruction by their thoughtful and careful use of time.

Research has demonstrated that student achievement is higher in classes where instructional time is maximized. The effective teacher prioritizes instruction—a process that is accomplished partially through allocation of time. One illustration of how effective teachers best use the scarce commodity of time is orchestrating smooth classroom transitions. They remain involved with the students during the entire class period, from start to finish, allowing for no idle or down time.

Use of time can be optimized in the classroom by using planning or pacing materials. Students often want to know what is next during class, coming up next week, or next month. So having a scope and sequence not only helps the teacher to plan, but addresses student needs for information. For example, the use of calendars for long-term, weekly, and daily planning, besides providing a visual reminder to the teacher, can help students plan for work. Effective teachers are not only organized, they also convey this vital skill to their students. Sharing with students how the teacher organizes time can serve as a model for students to assist in their own planning, thus equipping them with the tools of success in the larger world and instilling in them habits of efficiency.

Another way that the teacher can set up the classroom to maximize time allocation for instruction is by using staging areas. For example, a list on the back of the door of what the teacher needs to do if a new student arrives fulfills a dual purpose: the new student feels that the teacher is organized; and the teacher feels prepared for the student. Another time-saving device is to use a common place to keep materials such as attendance cards, hall passes, and extra paper—this saves time because the teacher does not have to search for the items. In essence, in the effective classroom there is a place for everything and everything is in its place.

Establishing a pattern so that students can anticipate academic transitions reduces the loss of instructional time. Students observe the routine and know what will occur. For example, a teacher who uses a class warm-up activity that is displayed on the board or at work stations when students enter the room accomplishes the following multiple purposes:

- Giving students a way to constructively use their time during a class change or morning arrival.
- Preparing the students for the day's activities.
- Offering the teacher an opportunity to take roll or respond to a note from a parent at the start of class while the students are engaged.
- Making use of time that otherwise would have been lost.

- Providing a focus for the first few minutes of class as the teacher addresses the warm-up that can be extended into an introduction for the lesson.

Some teachers follow the same routine virtually every class period, as they review homework, introduce a new concept, use the new skill in an activity, and, if there is time, have independent practice. Other teachers use visual cues to signal a transition as opposed to a routine set of activities. For example, playing music, ringing a bell, or flickering the lights may signal to students that they need to complete a task before the class can move to the next activity. Techniques and routines such as these can capture minutes a day that add up to instructional hours over the course of the school year.

Studies reveal that effective teachers exercise varying techniques and strategies to ensure maximum learning time. The practices suggested above and those that follow support the effective teacher's overall emphasis on instruction. Additionally, they provide the framework for maximizing not only instructional time, but also students' time on task. Effective teachers

- Follow a consistent schedule and maintain the procedures and routines established at the beginning of the year.
- Handle administrative tasks quickly and efficiently.
- Prepare materials in advance.
- Make clear and smooth transitions.
- Maintain momentum within and across lessons.
- Limit disruptions and interruptions through appropriate behavioral management techniques.

Key references: Bain & Jacobs, 1990; Berendt & Koski, 1999; Borich, 2000; Brophy & Good, 1986; Cawelti, 1999b; Cotton, 1999; Cotton, 2000; Covino & Iwanicki, 1996; Education USA Special Report, no date; Good & Brophy, 1997; Walker, 1998; Wang, Haertel, & Walberg, 1993a; Wang, Haertel, & Walberg, 1993b

Expecting Students to Achieve

The previous chapter discussed the importance, in the effective teacher's practice, of clear, specific expectations for student behavior. However, clarifying behavioral expectations isn't enough; an accompanying clear and consistent focus on achievement expectations is also essential to academic success. Effective teachers believe in their students and expect all of them to learn, regardless of their skill levels and starting points.

Moreover, effective teachers believe that students can learn; therefore, the students do learn. Unfortunately, this self-fulfilling prophecy works both ways. For example, if a teacher believes that students are low performing, unreachable, and unable to learn, the students perform poorly, seem unreachable, and do not learn.

The expectations a teacher holds for students, whether consciously or subconsciously, are demonstrated through her interactions with the students during instruction. Research on teacher expectations has demonstrated that the students in the bottom third of the class receive significantly lower expectations to achieve, and much less encouragement, from many teachers. Conversely, students in the top third of the class get the most teacher attention and encouragement. This pattern of teacher behavior can be eliminated through self-observation (videotaped or audiotaped lessons) and self-awareness, so teachers can then bestow the benefits of attention and encouragement on all students.

In several studies, teacher expectations have been shown to relate to student achievement, including the following findings and conclusions:

- High expectations are identified as a key component of student success.
- High expectations represent an overall orientation toward improvement and growth in the classroom, which has been demonstrated to be a defining characteristic of benchmark schools.
- Some studies have suggested that subtle communication of lower expectations for certain students from teachers can limit achievement, while clearly articulated high expectations can become a self-fulfilling prophecy.
- Effective teachers not only express and clarify expectations for student achievement, but also stress student responsibility and accountability for striving to meet those expectations.

Key references: Bloom, 1984; Cawelti, 1999a; Cawelti, 1999b; Cotton, 1999; Cotton, 2000; Covino & Iwanicki, 1996; Education USA Special Report, no date; Good & Brophy, 1997; Good & McCaslin, 1992; Johnson, 1997; Mason, Schroeter, Combs, & Washington, 1992; Peart & Campbell, 1999; Porter & Brophy, 1988; Price, 2000; Tschannen-Moran, Hoy, & Hoy, 1998; Wang, Haertel, & Walberg, 1993a; Wang, Haertel, & Walberg, 1993b; Wong & Wong, 1998

Planning and Preparing for Instruction

Organizing time and preparing materials in advance of instruction have been noted as important aspects of effective teaching. Both the organization of time and the

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preparation of materials are components of the broader practice of planning carefully for instruction. Once the plans are developed, evidence suggests that effective teachers follow the instructional or lesson plan while continuously adjusting it to fit the needs of different students.

During their instructional planning time, effective teachers assess or recall students' preconceptions and misconceptions about the subject matter. Pre-assessments can help gauge students' prior knowledge of the material. The point is that effective teachers take into account the abilities of their students and the students' strengths and weaknesses as well as their interest levels. To further assist with meeting individual needs, effective teachers typically plan a blend of whole-group, small-group, and individualized instruction. Planning for instruction involves careful preparation for specific lessons, as well as long-term planning to ensure coverage of curriculum. Some studies have demonstrated that student achievement is related to the amount of content coverage a teacher accomplishes. Consequently, careful, deliberate planning maximizes the amount of content a teacher is able to cover.

Since students learn at different rates, effective teachers plan academic enrichment and remediation opportunities for students. Through the teacher's knowledge of the students, it is possible to offer alternatives to a student or a small group of students who have mastered the material faster than the rest of the class. These students can study the concept on a deeper level or apply the concept in a different way. For students who may lack the prerequisite knowledge or skills, the teacher needs to provide time for them to learn the foundational material on which to build the new piece. Providing meaningful experiences for all students to learn is a goal of planning.

By planning a unit that takes into account the students' prior knowledge as well as their learning styles, a teacher can provide effective vehicles for instruction. Teachers tend to teach in the manner that they themselves learn best; however, effective teachers stretch beyond that comfort zone to incorporate different learning styles. For example, during a lesson on the water cycle, the teacher may solicit ideas of what the students already know, run an action simulation in which students roll dice to determine where in the water cycle the students will go next, incorporate a writing experience where the students personify the water droplet to tell about their journey, graph where the droplets went, and then discuss what they observed and compare it to what they had previously thought. Whatever the unit, students benefit if the material can be connected to something they are already familiar with from prior school experiences or real-life situations. In the water cycle activity, the teacher took what the students already knew, built upon it, and addressed some of their misconceptions. Conscientious planning for student instruction and engagement is a key to connecting the classroom to future success for students.

Research indicates that instructional planning for effective teaching includes the following elements:

- Identifying clear lesson and learning objectives while carefully linking activities to them is essential for effectiveness.
- Planning the instructional strategies to be deployed in the classroom and the timing of these strategies.
- Recognizing the importance of linking instruction to real life.
- Using advance organizers, graphic organizers, and outlines to plan for effective instructional delivery.
- Considering student attention spans and learning styles when designing lessons.
- Systematically developing objectives, questions, and activities that reflect higher-level and lower-level cognitive skills as appropriate for the content and the students.

Key references: Bain & Jacobs, 1990; Berliner & Rosenshine, 1977; Brookhart & Loadman, 1992; Brophy & Good, 1986; Cotton, 1999; Cotton, 2000; Covino & Iwanicki, 1996; Darling-Hammond, 2000; Darling-Hammond, 2001; Education USA Special Report, no date; Emmer, Evertson, & Anderson, 1980; Good & McCaslin, 1992; Johnson, 1997; Marzano, Pickering, & McTighe, 1993; Porter & Brophy, 1988; Rosenshine & Stevens, 1986

Figure 4.1
Key References: Organizing for Instruction

Reference	Importance of Instruction	Time Allocation	Teacher Expectation	Planning for Instruction
Bain & Jacobs, 1990	○	○		○
Berendt & Koski, 1999	○	○		
Berliner & Rosenshine, 1977	○			○
Bloom, 1984			○	
Borich, 2000		○		
Brookhart & Loadman, 1992				○
Brophy & Good, 1986	○	○		
Cawelti, 1999a	○	○	○	
Cawelti, 1999b	○	○	○	
Cotton, 1999	○	○	○	
Cotton, 2000	○	○	○	
Covino & Iwanicki, 1996	○	○	○	
Darling-Hammond, 2000				○
Darling-Hammond, 2001				○
Education USA Special Report, no date		○	○	○
Emmer, Evertson, & Anderson, 1980				○
Good & Brophy, 1997		○	○	
Good & McCaslin, 1992			○	○
Holt-Reynolds, 1999	○			
Johnson, 1997			○	○
Marzano, Pickering, & McTighe, 1993				○
Mason, Schroeter, Combs, & Washington, 1992			○	
Molnar et al., 1999	○			
Peart & Campbell, 1999			○	
Porter & Brophy, 1988			○	○

Figure 4.1 *continued*
Key References: Organizing for Instruction

Reference	Importance of Instruction	Time Allocation	Teacher Expectation	Planning for Instruction
Price, 2000			○	
Rosenshine & Stevens, 1986				○
Tschannen-Moran, Hoy, & Hoy, 1998			○	
Walker, 1998		○		
Wang, Haertel, & Walberg, 1993a	○	○	○	
Wang, Haertel, & Walberg, 1993b	○	○	○	
Wong & Wong, 1998			○	

5

Implementing Instruction

A 28-year veteran of the elementary school classroom uses a variety of instructional strategies in the morning. Her students appear engaged and eager to participate in the instruction that today is focusing on reviewing skills for the state's standardized test. She alternates activities that require movement with quiet work. The morning work started with editing sentences on paper. Then students were called to the chalkboard to share their edits with the class. Next, the students worked at their seats on a spelling activity, followed by an action activity in which every student was given a vocabulary word on a piece of paper. The students defined the word and then one by one left their seats to find their positions in the alphabetizing line. The students helped each other to find the proper place. The teacher channels the students' energy into the instruction and capitalizes on their desire to socialize and move. The final activity of the morning was quiet—buddy reading during which the teacher circulated around the room. Every instructional minute was used, and the students responded well to the pacing.

VETERAN TEACHER, 3RD GRADE

Beyond teacher training, beyond rapport with students, and beyond skills in classroom management and organization, what do effective teachers actually do in the classroom? All the previous chapters focus on the important personal qualities and social and organizational behaviors that surround the teaching process. Undoubtedly, a teacher's preparation, relationships with students, and classroom management techniques are inextricably linked with classroom success. When it comes to assessing a teacher's effectiveness, however, there is nothing more important to consider than the actual act of teaching.

While this chapter is intended to highlight an effective teacher's need to possess and use a repertoire of effective instructional strategies, to communicate effectively, and to support student engagement in the teaching-and-learning process, it is not an encyclopedia of what works and what doesn't in the classroom. Indeed, the contextual issues related to the art of teaching defy the creation of a single list of effective instructional behaviors. Rather, what is intended here is to provide a fundamental underpinning for academic success. In relation to this purpose, the chapter provides an overview of the effective teacher's instructional practice, focusing on research-based elements of teaching. Figure 5.1, at the end of the chapter, outlines key references relating to these elements.

Use of Instructional Strategies

After instruction has been planned and the classroom prepared, teachers must begin to actually interact academically with students and with the curriculum—they must teach. Many elements of the teaching process have been linked to effectiveness in teaching, including the strategies teachers use, the clarity of their explanation of material, and the types of questions they ask. In addition, the methods teachers use to keep students focused and engaged clearly are important in implementing instruction effectively.

A teacher's repertoire of teaching strategies is an important element of overall effectiveness. Studies emphasize not only a teacher's efforts at planning instruction and selecting appropriate activities prior to instruction, but also successfully implementing strategies appropriate to the content and instructional goals. The literature on instruction suggests that students whose teachers develop and regularly integrate inquiry-based, hands-on learning activities, critical thinking skills, and assessments into daily lessons consistently out-perform their peers.

Flexibility and adeptness with a variety of teaching strategies contribute to teacher effectiveness. Effective teachers are constantly searching for group instructional strategies that are as effective as one-on-one tutoring. Direct teaching is one example of an effective instructional technique; studies illustrate the effectiveness of other teaching strategies as well.

Teachers who successfully employ a range of strategies reach more students because they tap into more learning styles and student interests. They also can use different strategies to ensure that concepts are well understood. Effective teachers routinely combine instructional techniques that involve individual, small-group, and whole-class instruction. This allows them to monitor and pace instruction based on the individual needs of students.

Some of the strategies and activities deemed effective in terms of promoting student achievement include direct teaching as well as guided and independent practice. Studies indicate that using manipulatives along with an integrative approach to problem solving in mathematics improves student performance on standardized assessments. The use of concept mapping and graphic organizers to promote students' understanding and retention of content are also factors related to effective teaching. Furthermore, effective teachers consistently note problem solving across the curriculum as an important aspect of their success.

In addition to applying basic principles in their lessons, effective teachers stress the importance of higher mental processes, such as problem-solving techniques, analytical thinking skills, and creativity. These skills enable students to relate their learning to real-life situations and incorporate concepts into their long-term memory. Other important instructional variables found to affect student achievement include using student ideas and eliciting student comments.

The following findings related to instructional strategies are supported by the existing research:

- Techniques and instructional strategies have nearly as much influence on student learning as student aptitude.
- Lecturing, a common teaching strategy, is an effort to quickly cover the material; however, it often overloads and overwhelms students with data, making it likely that they will confuse the facts presented.
- Hands-on learning, especially in science, has a positive effect on student achievement.
- Teachers who use hands-on learning strategies have students who out-perform their peers on the National Assessment of Educational Progress (NAEP) in the areas of science and mathematics.
- Despite the research supporting hands-on activity, it is a fairly uncommon instructional approach.
- Students have higher achievement rates when the focus of instruction is on meaningful conceptualization, especially when it emphasizes their own knowledge of the world.

- Effective teachers recognize that no single instructional strategy can be used in all situations. Rather, they develop and call on a broad repertoire of approaches that have proven successful for them with students of varying abilities, backgrounds, and interests.

Key references: Bain & Jacobs, 1990; Blair, 2000; Bloom, 1984; Brookhart & Loadman, 1992; Brophy & Good, 1986; Cawelti, 1999a; Cotton, 1999; Cotton, 2000; Covino & Iwanicki, 1996; Darling-Hammond, 2000; Darling-Hammond, 2001; Education USA Special Report, no date; Good & McCaslin, 1992; Johnson, 1997; Marzano, Pickering, & McTighe, 1993; Mason, Schroeter, Combs, & Washington, 1992; Molnar et al., 1999; NASSP, 1997; Palmer, 1990; Peart & Campbell, 1999; Rosenshine & Stevens, 1986; Shellard & Protheroe, 2000; Shulman, 1987; Wang, Haertel, & Walberg, 1993b; Wenglinsky, 2000

Communicating High Expectations to Students

A teacher's ability to give clear and focused explanations to students and to clarify expectations for achievement are important aspects of effective instructional delivery. Effective teachers expect students to learn—they take the responsibility, themselves, to make sure students do learn. They set high standards and ensure a challenging curriculum for all students. Although achievement is related to the range of teaching strategies a teacher employs, clarity of explanation and expectation is a separate skill that is also vital in teacher effectiveness.

Communication is fundamental to any profession that requires interaction among people and within an organization. Teaching is no exception. Clarity in explanation, an important communication skill, is manifested in two primary ways in the teaching process. The first relates to the teacher's ability to explain content clearly and in a focused manner, pointing out concepts and relationships. The second concerns the teacher's clarity in terms of explaining directions for how students are to complete an activity. Further, the teacher's job requires clear communication of expectations, encouragement, and caring. Moreover, the communication of content in teaching is far more than relating information. Effective communication in teaching requires teachers to clearly understand subject matter and how to share that subject matter with students in a way that they come to own it and understand it deeply.

Because, in the eyes of students, the teacher's affective characteristics are often of primary concern, teachers must constantly communicate a climate of support and encouragement to ensure that students participate actively in the two-way teaching and learning process. Furthermore, effective management and student learning are clearly related to communication of expectations.

In several studies, teacher expectations and the ability to effectively communicate those expectations have been shown to relate to student achievement:

- Students and teachers who are asked about teaching effectiveness consistently note the importance of clarity in explanation of content.
- Examples and guided practice (as appropriate to the lesson) are important parts of getting the point of the lesson across; additionally, these examples may represent clarity both in content and in directions and procedures.
- Teachers can improve the performance of students who normally exhibit average achievement by setting and communicating high expectations.
- Successful teachers cite high expectations for themselves and their students as a key part of their success.
- Expectations that are set high represent an overall orientation toward improvement and growth in the classroom. High expectations have been demonstrated to be a defining characteristic of benchmark schools.
- Teachers stress students' personal responsibility and accountability for striving to meet high expectations. Linked to this emphasis is the importance of teaching students metacognitive strategies to support reflection on learning progress.

Key references: Bain & Jacobs, 1990; Berliner & Rosenshine, 1977; Blair, 2000; Brophy & Good, 1986; Cawelti, 1999a; Cawelti, 1999b; Cotton, 1999; Cotton, 2000; Covino & Iwanicki, 1996; Demmon-Berger, 1986; Emmer, Evertson, & Anderson, 1980; Good & Brophy, 1997; Good & McCaslin, 1992; Johnson, 1997; Marzano, Pickering, & McTighe, 1993; Mason, Schroeter, Combs, & Washington, 1992; NASSP, 1997; Peart & Campbell, 1999; Porter & Brophy, 1988; Price, 2000; Rosenshine & Stevens, 1986; Wang, Haertel, & Walberg, 1993a; Wang, Haertel, & Walberg, 1993b

Understanding the Complexities of Teaching

Teaching occurs at the crossroads of complex disciplines interacting with diverse and complex student learners. The effective teacher must have sufficient knowledge of subject matter and of teaching and learning to appreciate these complexities. An understanding and appreciation of these complexities can help prevent the teacher from trivializing content and from underestimating the work it will take to prepare lessons and to implement them with students. The effective teacher also recognizes each student as a multifaceted person, understanding that each student brings a lifetime of ideas and experiences in and out of school to the classroom. Moreover, the effective teacher recognizes that a class is, itself, a dynamic and complex entity, made of many personalities, evolving into a corporate personality of its own. All these understandings contribute to a teacher's interactions with students, plans and practices for managing the environment, and preparation and differentiation for student learning needs. In a word, teaching is complex.

Effective teachers emphasize meaning. They encourage students to respond to questions and activities that require them to discover and assimilate their own understanding, rather than to simply memorize material. These teachers also present and engage students in content at various levels of complexity, using a broad range of objectives and activities and employing activities and questions that address higher and lower levels of cognitive complexity.

Research on effective teaching has yielded the following results with regard to cognitive complexity of classroom tasks:

- Effective teachers are concerned with having students learn and demonstrate understanding of meanings rather than merely memorizing facts or events.
- Effective schools and effective teachers place priority on reading because it affects success in other content areas and overall achievement gains.
- Students have higher achievement rates when the focus of instruction is on meaningful conceptualization, especially when it builds on and emphasizes their own knowledge of the world.

Key references: Berliner & Rosenshine, 1977; Blair, 2000; Brophy & Good, 1986; Cawelti, 1999a; Cotton, 2000; Demmon-Berger, 1986; Good & Brophy, 1997; Marzano, Pickering, & McTighe, 1993; Porter & Brophy, 1988; Shellard & Protheroe, 2000; Taylor, Pearson, Clark, & Walpole, 1999; Wenglinsky, 2000

Using Questioning Techniques

Questions and answers, from teachers to students and back again, represent much of the academic interaction that takes place in schools. This process supports student engagement in learning and a teacher's ability to monitor the learning process. Although effectiveness research supports the importance of questioning, the definitions of the kinds of questions that are most beneficial vary. What is clear, however, is that good questioning is definitely an important aspect of effective teaching.

Several studies have shown greater levels of student achievement relating to the teacher's use of lower-level, concrete questions, but other studies have supported the benefits of higher-level questions in encouraging student achievement. This variance in results suggests the importance of a variety of question types to meet student needs and support student learning. Several key points outlined by these studies about questioning are as follows:

- Questions are most valuable when they receive responses—correct or incorrect—because responses encourage student engagement, demonstrate understanding or misconception, and further the discussion.
- The level of difficulty and cognitive level of questions should reflect the context for an optimal match; the level of the question should reflect the type of content, the goals of the lesson, and the students involved, with sufficient variance of question type within and across lessons to maintain interest and momentum.
- Questions should be considered carefully and prepared in advance of a lesson to ensure that they support the goals and emphasize the key points, along with maintaining appropriate levels of difficulty and complexity.
- Questions within a lesson should be considered as a sequence, not as isolated units, in planning, implementing, and assessing.
- Studies indicate that questioning techniques are imperative for teachers who desire to increase their ability in assessing student learning.
- Wait time is an important aspect of questioning; longer wait times have related to higher student achievement in several studies. However, amount of wait time should also be considered in terms of maintaining student engagement and lesson momentum.

Key references: Berliner & Rosenshine, 1977; Brophy & Good, 1986; Cawelti, 1999a; Cotton, 1999; Cotton, 2000; Covino & Iwanicki, 1996; Darling-Hammond, 2000; Rosenshine & Stevens, 1986; Tobin, 1980; Tobin & Capie, 1982; Wang, Haertel, & Walberg, 1993a; Wang, Haertel, & Walberg, 1993b

Supporting Student Engagement in Learning

Along with the importance of time allocated to instruction by the teacher, the time the students spend "on task," or engaged in the teaching and learning activity, is an important contributor to classroom success. To encourage student involvement in activities and lessons, effective teachers use varying strategies including calling on students in random order, providing any necessary additional clarification and illustration, and finding something positive to say when students do respond or interact. Teachers who use positive reinforcement, praise students, and employ meaningful activities are more likely to actively engage students in learning.

Here are research results related to student engagement in learning:

- Student engagement with learning activities is supported by the teacher's attention to the momentum of the daily lesson, to appropriate questioning, and to clarity of explanation in terms of both content and directions.
- Effective teachers are accepting, supportive, and persistent in challenging and engaging students in all aspects of instruction.
- Effective teachers vary not only their own instructional strategies, but also the types of assignments and activities given to students to support increased student engagement.
- Student engagement tends to be higher when activities are led and paced by the teacher, and student engagement is lowest during presentations by other students.
- Step-by-step directions around procedures to be followed in a given activity have been shown to be an important part of student success in activities, and they also encourage high levels of student engagement.
- Student engagement is maximized when students engage in authentic activities related to the content under study; for example, in primary classrooms effective teachers engage all students in a variety of reading and writing tasks throughout the day.
- Successful student engagement has important affective benefits for students, as it encourages a more positive attitude toward school.

Key references: Bloom, 1984; Borich, 2000; Brophy & Good, 1986; Cawelti, 1999a; Cotton, 1999; Cotton, 2000; Covino & Iwanicki, 1996; Cruickshank & Haefele, 2001; Cunningham & Allington, 1999; Demmon-Berger, 1986; Doyle, 1986; Emmer, Evertson, & Anderson, 1980; Good & Brophy, 1997; Johnson, 1997; Wang, Haertel, & Walberg, 1993a; Wang, Haertel, & Walberg, 1993b

Figure 5.1
Key References: Implementing Instruction

Reference	Instructional Strategies	Content & Expectations	Complexity	Questioning	Student
Bain & Jacobs, 1990	●	●			
Berliner & Rosenshine, 1977		●	●	●	
Blair, 2000	●	●	●		
Bloom, 1984	●				●
Borich, 2000					●
Brookhart & Loadman, 1992	●				
Brophy & Good, 1986	●	●	●	●	●
Cawelti, 1999a	●	●	●	●	●
Cawelti, 1999b		●			
Cotton, 1999	●	●		●	
Cotton, 2000	●	●	●	●	●
Covino & Iwanicki, 1996	●	●		●	●
Cruickshank & Haefele, 2001					●
Cunningham & Allington, 1999					●
Darling-Hammond, 2000				●	
Darling-Hammond, 2001	●				
Demmon-Berger, 1986		●	●		●
Doyle, 1986					●
Education USA Special Report, no date	●				
Emmer, Evertson, & Anderson, 1980		●			●
Good & Brophy, 1997		●			●
Good & McCaslin, 1992	●	●			
Johnson, 1997	●	●			●
Marzano, Pickering, & McTighe, 1993	●	●	●		
Mason, Schroeter, Combs, & Washington, 1992	●	●			

Figure 5.1 *continued*
Key References: Implementing Instruction

Reference	**Instructional Strategies**	**Content & Expectations**	**Complexity**	**Questioning**	**Student**
Molnar et al., 1999	●				
National Association of Secondary School Principals, 1997		○			
Palmer, 1990	●				
Peart & Campbell, 1999	●	●			
Porter & Brophy, 1988		●	●		
Price, 2000		●			
Rosenshine & Stevens, 1986	●	○		●	
Shellard & Protheroe, 2000	●		○		
Shulman, 1987	●				
Taylor, Pearson, Clark, & Walpole, 1999			○		
Tobin, 1980				●	
Tobin & Capie, 1982				●	
Wang, Haertel, & Walberg, 1993a		●		●	●
Wang, Haertel, & Walberg, 1993b	●	●		●	●
Wenglinsky, 2000	●		●		

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6

Monitoring Student Progress and Potential

> *A teacher was asked how he would assess student learning and he responded with "end-of-the-week tests, state standardized tests, skill sheets, homework, verbalizations, and applying the lesson skill to another lesson." He used testing to track student progress and target areas that needed to be revisited. During a lesson, he moved students from questions that required simple recall to those that required students to apply and synthesize material. He wanted students to share what they thought and why they thought it. Furthermore, he used the input from the students to provide feedback to them in terms of acknowledging a good question or responding by pushing the students to delve deeper. The teacher used written, verbal, and nonverbal cues from his students to monitor and assess their academic success.*
>
> POST-OBSERVATION INTERVIEW
> WITH A 29-YEAR TEACHING VETERAN

Monitoring and assessing student development and work is a complex task. With an increasing number of states having high-stakes testing linked to graduation requirements as well as statewide testing programs in the lower grades, teachers feel pressure to prepare students to be successful on the tests by aligning their instruction with the state's standards. As teachers provide experiences for students to learn material, they still must check for individual student learning. There are a variety of means to teach content and just as many ways to monitor and assess understanding. Effective teachers employ all the tools at their disposal to make a positive impact on students, including the use of homework and feedback. Figure 6.1 provides a list of key references to the elements that effective teachers use to monitor student progress and potential.

Importance of Homework

The value of homework is often questioned today, especially when students participate in so many other activities outside school and when teachers become frustrated with the number of students who do not complete homework assignments. However, homework remains an important part of effective teaching when used as an extension of the classroom.

Studies have been conducted to assess the value of homework in terms of student achievement, yielding the finding that one of the most influential school-based factors contributing to student learning is the amount of time spent on homework. One study stated the basic purposes of homework: practice, preparation, elaboration. Practice homework is the reinforcement of familiar concepts that need to be refined. Preparation focused homework exposes a student to a concept that the class will study in-depth on the next school day. Elaboration facilitates the exploration of related concepts. Before assigning any type of homework, effective teachers establish guidelines that include the following information:

- Purpose for the assignment.
- Amount of homework that will be assigned.
- Expectations for completion of the homework as well as consequences for not completing it.
- Types and amount of assistance from parents considered appropriate.

In addition to setting these guidelines, effective teachers also clearly communicate them to their students and parents.

A partnership among school support programs, teacher, and parents forms a triangle with the student in the center. In the triad, the teacher and the parents have the greatest contact with the child. Still, effective teachers do not naively assume that parents will support their child doing homework; they equip parents with the tools to make homework time successful. Teachers share tips like these:

- Designate a well-lit space for homework.
- Establish a time to do the work or use the calendar to plan when the work can be done if schedules vary.
- Ask students specifics about the school day and what needs to be done each night.

- Explain the benefits of homework and provide statements that parents can use with their child.
- Assure parents that the teacher wants to hear if the student needs lots of coaching from parents.

When teachers give parents concrete ideas of how to support their children, the home-and-school connection is strengthened and the homework experience is more productive.

Effective teachers not only assign homework, but also check and review it regularly. Students of teachers who spend more time dispensing homework as well as providing considerable supportive feedback make higher gains than students whose teachers fail to spend this time on homework. Feedback on completed homework is particularly important. A teacher may choose to grade the homework assignment by simply indicating correct and incorrect answers or by providing written comments related to the content. By using these types of feedback on a regular basis, teachers can help increase students' learning gains by as much as 30 percentile points on a standardized test in one year, as indicated by one study. A teacher who does not provide regular feedback on homework only realizes a third of the gain made by the educator who gives feedback.

The quality of the homework assignments is the important issue, not the quantity. Effective teachers assign homework that does not necessarily involve a finished paper to be submitted by the student. Rather, they assign homework that provokes thought for subsequent use in class discussions or writing activities. In fact, some researchers suggest that homework assignments should empower students to learn. This empowerment takes place only if students actually complete the homework.

Effective teachers provide specific goals and guidelines for homework and allow students to meet those requirements in various creative ways, such as performances, creative literature, videotapes, or posters. They use homework as a tool to assess the learning needs of the broad range of students within their classroom.

Additional research-supported findings include the following keys to effective homework:

- Homework has positive effects on student achievement when it is clearly explained and related to the content under study in the classroom and to student capacity.
- Homework is more effective in influencing student achievement when it is graded, commented on, and discussed in class.
- Effective teachers list homework as an important element in students' success.

- Only 14 percent of teachers reported assigning homework for at least one half-hour per night.
- For every additional 30 minutes spent on homework a night, high school students may increase their grade point averages by half a point.

Key references: Cawelti, 1999a; Cawelti, 1999b; Covino & Iwanicki, 1996; Education USA Special Report, no date; Marzano, Pickering, & Pollock, 2001; Senge et al., 2000; Walberg, 1984; Walberg, 1994; Wenglinsky, 2000

Monitoring Student Learning and Providing Feedback

Assessment is a central element of the teaching process. Assessment is used to determine the effectiveness of a lesson in terms of student learning and student engagement, to evaluate student progress, and as a basis for continuing instruction. The effective teacher uses assessment efficiently to monitor student progress and to plan further instruction. Assessments of various formats provide feedback to the teacher about what strategies are working, which students need more targeted assistance, and what content needs to be revisited. The students of these teachers score higher on standardized tests than students of teachers who primarily use portfolio and project assessments as the culminating event in a unit and do not reflect upon the results and address areas of weakness.

Effective teachers use a variety of assessment practices to monitor student learning, including formal and informal assessments, and formative and summative assessments. They monitor student progress informally through such techniques as scanning and circulating around the room, or simply talking to individuals or small groups of students about specific tasks or activities. These teachers make notes about difficulties they observe and spend time thinking about how they can better reach students. More formal monitoring of student progress includes teacher-made or standardized tests, projects, or writing assignments. Assessment of student learning is not limited to just the individual; these approaches can be applied to a group of students as well.

Effective teachers frequently use in-class tests. They understand how to interpret and use the information discerned from standardized and teacher-made achievement tests. A common practice is to count how many students incorrectly answer a question and then to analyze that question to determine if it was misleading or if the students did not learn the material. They also look at the type of questions a student incorrectly answers and consider whether teaching test-taking skills can assist the student. Finally, teachers can group questions by the concept they are assessing to determine if the entire concept needs to be retaught with a different instructional approach. Effective teachers follow-up their assessments with re-teaching and enrichment as needed. In addition, effective teachers ensure that assessments are not only aligned with the curriculum, but with the actual instruction that takes place.

Educators recognize the importance of feedback to students on their work. Feedback is one of the most powerful modification techniques for increasing learning outcomes in students. Effective teachers provide feedback in a timely manner and ensure that it relates specifically to the criteria of the task. Studies found that the amount of time between the activity and the feedback has a critical effect on student achievement. In fact, the longer the delay in giving feedback, the less likely students will respond to the feedback and the less likely learning will be enhanced.

Effective teachers provide feedback that is primarily corrective. They avoid simply indicating right or wrong answers because this practice can actually have a negative impact on student learning. Effective teachers provide specific explanations of what students are doing correctly, what they are not doing correctly, and how to fix it.

Students need to learn how to critically examine their own work and to provide constructive criticism to others. Effective educators take the time to instruct students on how to perform constructive criticism. A useful tool for many teachers is a rubric in which students are provided the parameters of success before working on the assignment; students can then assess their own work prior to submitting it to the teacher. Then, the teacher can use the same rubric for feedback. Depending on the assignment, offering students an opportunity to incorporate the feedback and resubmit work for additional credit is a worthwhile venture that reinforces the value of revisions.

Without doubt, feedback gained from oneself, one's peers, and the teacher enhances the learning process. Effective teachers use a variety of inputs to monitor student progress, and they constantly probe and collect information from the learners with whom they work in class. A variety of techniques, including mental notes, work samples, and feedback can assist the teacher in creating improved, more meaningful instruction for the students.

Here are additional findings related to the ongoing assessment process and teacher feedback:

- Teachers in schools with high achievement rates use pre-assessments to support targeted teaching of skills important to learn for standardized tests, as well as to group students for reteaching.

- Effective teachers plan and implement good monitoring strategies by targeting questions to the lesson objectives.
- Effective teachers carefully choose the information sources they use for assessing learning needs.
- Effective teachers think through likely misconceptions that may occur during instruction and monitor students for signs of these misconceptions.
- Clear, specific, and timely feedback given throughout the learning process supports student learning.
- Effective teachers give feedback in a manner that is supportive and encouraging to students.
- Effective teachers reteach material to students who did not achieve mastery, and they offer tutoring for students who need or seek additional help.

Key references: Berliner & Rosenshine, 1977; Blair, 2000; Brophy & Good, 1986; Cawelti, 1999a; Cotton, 2000; Covino & Iwanicki, 1996; Good & McCaslin, 1992; Johnson, 1997; Marzano, Pickering, & Pollock, 2001; Mason, Schroeter, Combs, & Washington, 1992; Mendro, 1998; Mitchell, 1998; Peart & Campbell, 1999; Porter & Brophy, 1988; Rosenshine & Stevens, 1986; Wang, Haertel, & Walberg, 1993a, Wang, Haertel, & Walberg, 1993b

Responding to the Range of Student Needs and Abilities in the Classroom

How best to differentiate instruction and individualize for the range of student needs and abilities in the classroom is an ongoing challenge. Effective teachers tend to recognize individual and group differences among their students and accommodate those differences in their instruction. They adapt instruction to meet student needs, which requires careful assessment and planning for all students in the classroom, as well as the ability to select from a range of strategies to find the optimal match to the context.

Successful teachers present information in such a way that the majority of the class is challenged, yet can be successful. They adapt the assignment to meet the needs of other students who are either higher or lower functioning or who simply need the material presented differently. They also take the time to teach study and organizational skills to students to provide them with the skills that many of their peers instinctively acquire and use.

The ability to improvise while teaching to meet the learning needs of all students is another sign of an effective teacher. Students of teachers who receive specialized training in working with a broad range of students, including culturally diverse students, gifted students, and students with special needs, perform (on average) more than one full grade level above their peers. These teachers understand and use "scaffolding" approaches to instruction that allow students to receive the help they need and to work at their own pace. For gifted learners, curriculum compacting can be used so that a student is able to master the objectives and move on to investigations and applications of greater interest to that student. Effective teachers use all available resources, including the school content area specialists, other students, siblings, parents, classroom volunteers, tutors, community members, and before- and after-school meeting times to meet the needs of students.

Studies of student achievement and of perceptions of teacher effectiveness have emphasized the importance of appropriate differentiation in instruction, including the following findings:

- Students are most engaged and achieve most successfully when instruction is appropriately suited to their achievement levels and needs.
- Students of teachers who participate in staff development training for implementing instruction for special populations tend to have students with higher learning outcomes.
- Effective teachers use a variety of grouping strategies, including cooperative grouping, flexible grouping, and ability grouping with differentiation to support student learning.
- Instructional differentiation requires careful monitoring and assessment of student progress, as well as proper management of activities and behavior in the classroom; placing students into groups based on ability without tailoring instruction to the different groups is insufficient to support academic success.
- Effective teachers know and understand their students as individuals in terms of their abilities, achievement, learning styles, and needs.
- Studies of student achievement have demonstrated that effective teachers demonstrate effectiveness with the full range of student abilities in their classrooms.

Key references: Bain & Jacobs, 1990; Blair, 2000; Brookhart & Loadman, 1992; Brophy & Good, 1986; Cawelti, 1999a; Cotton, 1999; Cotton, 2000; Covino & Iwanicki, 1996; Darling-Hammond, 2000; Education Review Office, 1998; Johnson, 1997; Kulik & Kulik, 1992; Mitchell, 1998; Molnar et al., 1999; Shellard & Protheroe, 2000; Wright, Horn, & Sanders, 1997

Figure 6.1
Key References: Monitoring Student Progress and Potential

Reference	Homework	Monitoring Student Progress	Responding to Student Needs & Abilities
Bain & Jacobs, 1990			○
Berliner & Rosenshine, 1977		○	
Blair, 2000			○
Brookhart & Loadman, 1992			○
Brophy & Good, 1986		○	○
Cawelti, 1999a	○	○	○
Cawelti, 1999b	○		
Cotton, 1999			○
Cotton, 2000		○	○
Covino & Iwanicki, 1996	○	○	○
Darling-Hammond, 2000			○
Education Review Office, 1998			○
Education USA Special Report, no date	○		
Good & McCaslin, 1992		○	
Johnson, 1997		○	○
Kulik & Kulik, 1992			○
Marzano, Pickering, & Pollock, 2001		○	
Mason, Schroeter, Combs, & Washington, 1992	○	○	
Mendro, 1998		○	
Mitchell, 1998		○	○
Molnar et al., 1999			○
Peart & Campbell, 1999		○	
Porter & Brophy, 1988		○	
Rosenshine & Stevens, 1986		○	

Figure 6.1 *continued*
Key References: Monitoring Student Progress and Potential

Reference	**Homework**	**Monitoring Student Progress**	**Responding to Student Needs & Abilities**
Senge, Cambron-McCabe, Lucas, Smith, Dutton, & Kleiner, 2000	◎		
Shellard & Protheroe, 2000			◉
Walberg, 1984	○		
Walberg, 1994	○		
Wang, Haertel, & Walberg, 1993a		○	
Wang, Haertel, & Walberg, 1993b		○	
Wenglinsky, 2000	●		
Wright, Horn, & Sanders, 1997			◉

7

Effective Teaching: What Does It All Mean?

Think for a moment about your favorite teacher. Picture the teacher's appearance. Make a mental list of what made that teacher so special that years after leaving elementary, middle, high school, or college, you can still remember the teacher's name. Now, compare your mental list to what you have read in this book. How many effective teacher characteristics can you identify in your memory of your favorite teacher?

We are inherently drawn to teachers who are effective for us. Like the student in Chapter 2 who saw some of herself in her middle school science teacher, we recognized something in that special teacher. That something, those qualities, still resonate with us years after leaving that effective teacher's classroom. In research and in real life, we cherish many portraits of effective teachers. As is evident from this book and the research upon which it is based, as educators we have long searched for an answer to the fundamental question: What makes an effective teacher? Answers to this question are far from simple.

Effective teaching is the result of a combination of many factors, including aspects of the teacher's background and ways of interacting with others, as well as specific teaching practices. Moreover, the answers are complex because the question is complex. To discover what makes an effective teacher, we must understand what is meant by the word *effective*, understanding that the definition of this term has multiple layers and implications within the teaching profession.

Effective Teaching: A Summary

Based on the assumption that elements from all the categories identified in this book must be combined to achieve teaching effectiveness, the research results included in this text might be summarized under three overarching statements describing the effective teacher:

- The effective teacher recognizes complexity.
- The effective teacher communicates clearly.
- The effective teacher serves conscientiously.

Recognizing Complexity

Teaching is an extraordinarily complex undertaking. To illustrate, just think about how we teach a child to read or an older student to understand algebraic equations. In either case, teaching—at least successful teaching—is the process of teaching complex disciplines and processes to complex pupils. Teaching is the ability to transfer knowledge so that the learners acquire—even own—the knowledge and skills for themselves.

To succeed, the effective teacher must have sufficient knowledge of content, of pedagogy, of context, and of students to appreciate the intricacies that are bound up in the teaching-and-learning process. This deep understanding of complexity can help prevent the teacher from trivializing content and underestimating the work it takes to prepare lessons. An understanding of complexity is also reflected in the effort it takes to implement the lessons with students.

The effective teacher also recognizes each student as a unique individual, understanding that each one brings her own set of experiences and perspectives to the classroom. Moreover, the effective teacher recognizes that a class is a dynamic and multifaceted entity, made up of a myriad of personalities, with a personality all its own.

All these understandings contribute to a teacher's interactions with students, plans and practices for managing the environment, and preparation and differentiation for student learning needs. In a word, the effective teacher understands and can successfully navigate *complexity*.

Recognizing and understanding for a teacher is like getting into the driver's seat of a 5-speed, stick-shift automobile. The ineffective driver manages to get the car in gear, but cuts the engine off at every stop sign. The effective driver, like the effective teacher, adeptly and simultaneously handles multiple tasks and multiple meanings without losing sight of the goal of moving toward a specific destination.

Communicating Clearly

Communication is a key to success in any profession that requires interaction among people and within an organization. The teacher's job requires clear articulation of expectations, encouragement, and caring, as well as content knowledge. Moreover, the communication of content in teaching is far more than just talking about objectives. Effective communication in teaching requires that a teacher have a clear understanding of the subject matter and of how to share that material with students in a way that they come to own and understand it deeply. Beyond directly teaching content knowledge and skills, effective teachers also must be adept at facilitating students' own search for knowledge.

The teacher's affective characteristics are often a primary concern to the students. Therefore, the teacher must constantly communicate a climate of support and encouragement to ensure that students are engaged in the two-way teaching and learning process. Furthermore, effective management and student learning are clearly related to communication of expectations. Ultimately, being an effective communicator is about repackaging and delivering a message so that someone can receive, respond, adapt, and use the information successfully.

Serving Conscientiously

A final overarching construct that emerges from the review of effective teaching research is the teacher's willingness to dedicate time and energy to the profession. Working hard is important; but even better is working both hard and smart.

The effective teacher is concerned with his own continuous learning process and reflects on all the elements of performance in an effort to continuously improve. The effective teacher cares about students, and ensures that students recognize this caring and feel supported and encouraged. He cares about the classroom and strives to ensure an organized and positive learning environment. The importance of conscientious reflection and involvement in all aspects of teaching cannot be overemphasized in defining the effective teacher.

Improving Teacher Effectiveness

So where do we go from here? To improve teacher effectiveness, we need to consider all aspects of the profession—from preservice and inservice training to recruitment and

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retention of high-quality teachers. Many behaviors and characteristics found in effective teachers can be cultivated among novices through awareness brought about by observing other teachers, receiving peer feedback, cultivating collegial relationships, and participating in lifelong learning experiences.

- For those already in the field, high-quality professional development activities are necessary tools for improving teacher effectiveness. These activities must be collegial, challenging, and socially oriented, because learning itself entails these characteristics. Additionally, professional development training must be tailored to the individual teachers within a particular school to support both the individual and organizational needs as they exist within a particular context. In essence, teacher effectiveness is not an end product; rather, it is an ongoing, deliberate process. Teacher success is a lifelong pursuit.

One Size Doesn't Fit All

Qualities of Effective Teachers attempts to grasp the elusive concept of teaching effectiveness by summarizing research results in these major categories:

- Prerequisites of effective teaching
- The teacher as a person
- Classroom management and the learning environment
- The teaching-and-learning process, itself

Specific elements within each of these categories have been found to be important in the work of effective teachers, as demonstrated through the research summaries within each chapter.

Clearly, a teacher's success is not based on any one element or any single source. Rather, teaching effectiveness draws on a multitude of skills and attributes in different combinations and in different contexts to produce the results that define effectiveness. For example, a teacher whose effectiveness is marked by the use of a range of teaching strategies likely has had solid educational preparation through coursework and professional development. Additionally, this teacher can actually employ good instructional strategies because her classroom is well managed, thus, providing sufficient time to employ the strategies.

Part of an effective teacher's good rapport with students is based on maintaining appropriate roles, which suggests clarity in behavioral expectations and consistency in response to disciplinary situations. Thus, the effective teacher demonstrates behaviors and characteristics related to all four major categories delineated in this book to achieve her goals of promoting a positive classroom climate and student learning. Nonetheless, while this book attempts to provide practical, insightful guidance regarding what is effective teaching, a critically important point should not be lost: one size does *not* fit all teachers.

There is no single formula for classroom success. We can identify attributes, background characteristics, and behaviors that contribute to success, but these are, in the final analysis, a general guide and not a prescription. Each teacher, in a unique classroom, and in a personal and unique way, must continuously strive to achieve.

Effective Teaching: The Ultimate Proof

In one study of effective teaching, school board members, principals, and teachers were asked to answer the question, What is the make up of an effective teacher? Each group focused on what was important from their respective viewpoint, and they concurred on three important points:

- Knowledge and caring are important effectiveness attributes.
- Communication and classroom management are vital to the success of teaching.
- Process and mastery are important products of teaching.

What these school board members, administrators, and teachers were saying is that teachers' backgrounds and teaching processes are important; however, those characteristics alone are not enough to define effective teaching. The ultimate proof of teacher effectiveness is student results.

The ability to identify effective teachers and to cultivate effective teaching results in students gaining more during the time spent in the classroom. If a student walks through a teacher's classroom 180 or 190 times, she should be better in a tangible, measurable way for the experience. The student should be able to read better, compute math more accurately, demonstrate a better understanding of her place in the world, or show other worthy achievements. In other words, measuring teacher success merely by teaching processes is not enough; outcomes count.

Simply put, teacher success equals student success. The one clear, abiding hallmark of effective teaching is student learning. As Joe Carroll, a former teacher and educational researcher, so aptly stated, ". . . nothing, absolutely nothing has happened in education until it has happened to a student."

* * *

Reflecting back on the outstanding teacher you thought of at the beginning of the chapter, think about how that teacher was able to meet your learning needs within the classroom. Consider how the teacher communicated in such a way that the concepts made sense. Now imagine what it took for that favorite teacher to create a positive experience in which you were challenged to achieve. That is an effective teacher.

PART

2

Teacher Effectiveness: Resources You Can Use

Part 2 of *Qualities of Effective Teachers* contains resources that can be used to apply the content and concepts presented in Part 1. Divided into three major sections, Part 2 provides skills checklists, detailed lists of teacher responsibilities and associated teacher behaviors, and an annotated bibliography.

Section I: Teacher Skills Assessment Checklists

The Teacher Skills Assessment Checklists are based on a synthesis of the research presented throughout this book. The checklists are designed to identify key indicators of effectiveness in a teacher's practice. Each effectiveness quality identified in a checklist includes multiple indicators of success. The checklists also provide a continuum for rating relative strengths and weaknesses, ranging from ineffective to master.

The checklists can be used for self-assessment by the teacher to review and reflect on the components identified as important for effective teaching. Additionally, supervisors and peers can use the skills checklists in their assessment of a teacher's ability. The checklists are intended to support identification of strengths and weaknesses in order that professional growth can be stimulated and professional development opportunities tailored to specific teacher needs.

Section II: Teacher Responsibilities and Teacher Behaviors

The information in this section is designed primarily to assist administrators and peer coaches in identifying key components of effectiveness as they visit classrooms and observe teachers in action. In essence, Section II is intended to facilitate a type of action research focused on behaviors teachers exhibit in their daily work. For some teachers the guidance that can emerge from feedback on the classroom qualities may be the impetus to refine a strategy or add something new to their toolkit of skills and techniques.

Section III: Annotated Bibliography

For the reader who would like to know more about specific aspects of the teacher effectiveness research, a selection of noteworthy resources are summarized in an annotated format. The short annotations are presented in a straightforward, compact, and uniform format for ease in referencing and using the information. The matrix (p. 96) preceding the annotated bibliography is a reference designed to connect the annotations with chapters 1–6 of the book. Additionally, a complete list of all references used in *Qualities of Effective Teachers* is provided at the end of Part 2 (pp. 118–123).

Section I:
Teacher Skills Assessment Checklists

The Teacher Skills Assessment Checklists are based on a synthesis of the research presented throughout *Qualities of Effective Teachers*. The checklists are designed to help identify key indicators of effectiveness in a teacher's practice. Each effectiveness quality identified in a checklist includes multiple indicators of success. The checklists also provide a continuum for rating relative strengths and weaknesses, ranging from ineffective to master.

The checklists can be used for self-assessment by the teacher to review and reflect on the components identified as important for effective teaching. Additionally, supervisors and peers can use the skills checklists as part of their assessment of another teacher's ability. The checklists are intended to support identification of strengths and weaknesses so that professional growth can be stimulated and professional development opportunities tailored to specific teacher needs.

Key to the Teacher Skills Checklists

MASTER:	Exhibits the quality such that others would be able to use the teacher as an expert for how to work with students. The teacher not only has a sense of the quality, but demonstrates an understanding of the essence of the quality.
PROFESSIONAL:	A teacher who exhibits the quality most of the time
APPRENTICE:	The teacher demonstrates the quality to the degree necessary to make the classroom function. May lack fluidness of use, but the result is still effective.
INEFFECTIVE:	A teacher who would benefit from more work on the quality in terms of working with a teacher at the professional or master level or taking classes.
NOT OBSERVED:	The observer has not seen evidence, either through demonstration or observation, of the quality.

Checklist 1—Teacher Skills Checklist
The Teacher as a Person

Quality	Indicators	Not Observed	Ineffective	Apprentice	Professional	Master
Caring	• Exhibits active listening • Shows concern for students' emotional and physical well-being • Displays interest in and concern about the students' lives outside school • Creates a supportive and warm classroom climate					
Fairness and Respect	• Responds to misbehavior on an individual level • Prevents situations in which a student loses peer respect • Treats students equally • Creates situations for all students to succeed • Shows respect to all students					
Interactions with Students	• Maintains professional role while being friendly • Gives students responsibility • Knows students' interests both in and out of school • Values what students say • Interacts in fun, playful manner; jokes when appropriate					
Enthusiasm	• Shows joy for the content material • Takes pleasure in teaching • Demonstrates involvement in learning activities outside school					
Motivation	• Maintains high-quality work • Returns student work in a timely manner • Provides students with meaningful feedback					

Checklist 1 *continued*
The Teacher as a Person

Quality	Indicators	Not Observed	Ineffective	Apprentice	Professional	Master
Dedication to Teaching	• Possesses a positive attitude about life and teaching • Spends time outside school preparing • Participates in collegial activities • Accepts responsibility for student outcomes • Seeks professional development • Finds, implements, and shares new instructional strategies					
Reflective Practice	• Knows areas of personal strengths and weaknesses • Uses reflection to improve teaching • Sets high expectations for personal classroom performance • Demonstrates high efficacy					

Checklist II—Teacher Skills Checklist
The Teacher as Classroom Manager and Organizer

Quality	Indicators	Not Observed	Ineffective	Apprentice	Professional	Master
Classroom Management	• Uses consistent and proactive discipline • Establishes routines for all daily tasks and needs • Orchestrates smooth transitions and continuity of classroom momentum • Balances variety and challenge in student activities • Multitasks • Is aware of all activities in the classroom • Anticipates potential problems • Uses space, proximity, or movement around the classroom for nearness to trouble spots and to encourage attention					
Organization	• Handles routine tasks promptly, efficiently, and consistently • Prepares materials in advance; ready to use • Organizes classroom space efficiently					
Disciplining Students	• Interprets and responds to inappropriate behavior promptly • Implements rules of behavior fairly and consistently • Reinforces and reiterates expectations for positive behavior • Uses appropriate disciplinary measures					

Checklist III—Teacher Skills Checklist
Organizing for Instruction

Quality	**Indicators**	**Not Observed**	**Ineffective**	**Apprentice**	**Professional**	**Master**
Importance of Instruction	• Focuses classroom time on teaching and learning • Links instruction to real-life situations of the students					
Time Allocation	• Follows a consistent schedule and maintains procedures and routines • Handles administrative tasks quickly and efficiently • Prepares materials in advance • Maintains momentum within and across lessons • Limits disruption and interruptions					
Teachers' Expectations	• Sets clearly articulated high expectations for self and students • Orients the classroom experience toward improvement and growth • Stresses student responsibility and accountability					
Instruction Plans	• Carefully links learning objectives and activities • Organizes content for effective presentation • Explores student understanding by asking questions • Considers student attention span and learning styles when designing lessons • Develops objectives, questions, and activities that reflect higher and lower level cognitive skills as appropriate for the content and the students					

Checklist IV—Teacher Skills Checklist
Implementing Instruction

Quality	Indicators	Not Observed	Ineffective	Apprentice	Professional	Master
Instructional Strategies	• Employs different techniques and instructional strategies, such as hands-on learning • Stresses meaningful conceptualization, emphasizing the student's own knowledge of the world					
Content & Expectations	• Sets overall high expectations toward improvement and growth in the classroom • Gives clear examples and offers guided practice • Stresses student responsibility and accountability in meeting expectations • Teaches metacognitive strategies to support reflection on learning progress					
Complexity	• Is concerned with having students learn and demonstrate understanding of meaning rather than memorization • Holds reading as a priority • Stresses meaningful conceptualization, emphasizing the student's knowledge of the world • Emphasizes higher order thinking skills in math					
Questioning	• Questioning reflects type of content, goals of lesson • Varies question type to maintain interest and momentum • Prepares questions in advance • Uses wait time during questioning					
Student Engagement	• Attentive to lesson momentum, appropriate questioning, clarity of explanation • Varies instructional strategies, types of assignments, and activities • Leads, directs, and paces student activities					

Checklist V—Teacher Skills Checklist
The Teacher Teaching: Monitoring Student Progress and Potential

Quality	Indicators	Not Observed	Ineffective	Apprentice	Professional	Master
Homework	• Clearly explains homework • Relates homework to the content under study and to student capacity • Grades, comments on, and discusses homework in class					
Monitoring Student Progress	• Targets questions to lesson objectives • Thinks through likely misconceptions that may occur during instruction and monitors students for these misconceptions • Gives clear, specific, and timely feedback • Re-teaches students who did not achieve mastery and offers tutoring to students who seek additional help					
Responding to Student Needs & Abilities	• Suits instruction to students' achievement levels and needs • Participates in staff development training • Uses a variety of grouping strategies • Monitors and assesses student progress • Knows and understands students as individuals in terms of ability, achievement, learning styles, and needs					

Section II:
Teacher Responsibilities and Behaviors

The teacher responsibilities and teacher behaviors, or qualities, are designed primarily to assist administrators and peer coaches in identifying key components of effectiveness as they visit classrooms and observe teachers in action. In essence, they are intended to facilitate a type of action research focused on behaviors that teachers exhibit in their daily work. For some teachers, the guidance that can emerge from feedback on the classroom qualities may be the impetus to refine a strategy or add something new to their toolkit of skills and techniques.

The positive and negative behaviors exhibited by teachers determine, to a great extent, their effectiveness in the classroom and, ultimately, the impact they have on student achievement. Several specific characteristics of teacher responsibilities and behaviors that contribute directly to effective teaching are listed for each of the following categories:

- The teacher as a person
- Classroom management and organization
- Organizing and orienting for instruction
- Implementing instruction
- Monitoring student progress and potential
- Professionalism

Red flags signaling ineffective teaching are presented at the end of each section. Both positive and negative characteristics are based on a plethora of research-based studies that address the concept of improving the educational system for both students and teachers. These qualities are general for any content area or grade level. Subject-specific qualities presented for the four content areas typically found in all schools include

- English
- History and Social Studies

- Mathematics
- Science

The lists are provided as a vehicle to promote teacher effectiveness.

The Teacher as a Person

The teacher is the representative of the content and the school. How a teacher presents himself makes an impression on administrators, colleagues, parents, and students. Often a student links the preference for a particular subject to a teacher and the way the subject was taught. A teacher who exudes enthusiasm and competence for a content area may transfer those feelings to the students. In addition, how the teacher relates to the pupils has an impact on the students' experience in the class. The teacher's personality is one of the first sets of characteristics to look for in an effective teacher. Many aspects of effective teaching can be cultivated, but it is difficult to effect change in an individual's personality.

Positive Qualities

- Assumes ownership for the classroom and the students' success
- Uses personal experiences as examples in teaching
- Understands feelings of students
- Communicates clearly
- Admits to mistakes and corrects them immediately
- Thinks about and reflects on practice
- Displays a sense of humor
- Dresses appropriately for the position
- Maintains confidential trust and respect
- Is structured, yet flexible and spontaneous
- Is responsive to situations and students' needs
- Enjoys teaching and expects students to enjoy learning
- Looks for the win-win solution in conflict situations
- Listens attentively to student questions and comments
- Responds to students with respect, even in difficult situations
- Communicates high expectations consistently

- Conducts one-on-one conversations with students
- Treats students equally and fairly
- Has positive dialogue and interactions with students outside the classroom
- Invests time with single students or small groups of students outside the classroom
- Maintains a professional manner at all times
- Addresses students by name
- Speaks in an appropriate tone and volume
- Works actively with students

Red Flags of Ineffective Teaching

- Believes that teaching is just a job
- Arrives late to school and class on a regular basis
- Has classroom discipline problems
- Is not sensitive to a student's culture or heritage
- Expresses bias (positive or negative) with regard to students
- Works on paperwork during class rather than working with students
- Has parents complaining about what is going on in the classroom
- Uses inappropriate language
- Demeans or ridicules students
- Exhibits defensive behavior for no apparent reason
- Is confrontational with students
- Lacks conflict resolution skills
- Does not accept responsibility for what occurs in the classroom

Classroom Management and Organization

A classroom reveals telltale signs of its user's style. Typically, a well-organized classroom has various instructional organizers, such as rules, posted on walls. Books and supplies are organized so that often needed ones are easily accessible. The furniture arrangement and classroom displays often reveal how the teacher uses the space. Once the students enter, the details of a classroom at work are evident. The teacher's plan for the environment, both the organization of the classroom and of students, allows the classroom to run itself amid the buzz of student and teacher interaction.

Positive Qualities

- Positions chairs in groups or around tables to promote interaction
- Manages classroom procedures to facilitate smooth transitions, instructional groups, procurement of materials and supplies, and supervision of volunteers and paraprofessionals in the classroom
- Manages student behavior through clear expectations and firm and consistent responses to student actions
- Maintains a physical environment where instructional materials and equipment are in good repair
- Covers walls with student work, student made.signs, memos, and calendars of student events
- Has students welcome visitors and observers and explain activities
- Emphasizes students addressing one another in a positive and respectful manner
- Encourages interactions and allows low hum of conversations about activities or tasks
- Maximizes the physical aspect of the environment
- Manages emergency situations as they occur
- Maintains acceptable personal work space
- Establishes routines for the running of the classroom and the handling of routine student needs (e.g., bathroom visits, pencil sharpening, and throwing away trash)
- Provides positive reinforcement and feedback
- Disciplines students with dignity and respect
- Shows evidence of established student routines for responsibilities and student leadership
- Exhibits consistency in management style
- Posts classroom and school rules
- Posts appropriate safety procedures

Red Flags of Ineffective Teaching

- Arranges desks and chairs in rows facing forward (without regrouping)
- Displays inconsistencies in enforcing class, school, and district rules
- Is not prepared with responses to common issues (bathroom visits, pencil sharpening, and disruptions)
- Uses strictly commercial posters to decorate walls

- Lists rules and consequences for negative behaviors (teacher formulated)
- Ranks student progress on charts for all to view
- Emphasizes facts and correct answers
- Assigns one task to be completed by all students
- Does not post or is not clear about expectations of students
- Does not display school or classroom rules
- Allows student disengagement from learning
- Is unavailable outside of class for students
- Complains inappropriately about all the administrative details that must be done before class begins
- Maintains an unsafe environment or equipment
- Students have no specific routines or responsibilities
- Keeps an unclean or disorderly classroom
- Uses many discipline referrals
- Makes up rules and consequences or punishment according to mood; unpredictable
- Does not start class immediately, takes roll and dallies

Organizing and Orienting for Instruction

Some teachers plan at home, and others work after school, crafting unit plans that incorporate various objectives. Regardless where or how teachers plan and organize for instruction, the evidence of effective work is seen in the classroom. An observer in the classroom of an effective teacher can quickly understand the work by viewing the daily lesson objectives and activities posted. Further, the teacher is able to share what the class will be doing to follow-up the lesson of the day. In many schools, teachers are required to submit weekly lesson plans; these plans typically note accommodations for different learning styles or needs, and the variety of instructional approaches that will be used. It is important to note, however, that a lesson plan is not an end-all; it is merely a description of what should be occurring in the classroom. Thus, a good plan doesn't guarantee high-quality instruction, but a poor plan most certainly contributes to ineffective instruction.

Positive Qualities

- Lesson plans are written for every school day
- Students know the daily plan because an agenda of objectives and activities is given
- Student assessment and diagnostic data are available
- Assessment data and pretest results are included in the preparation of lesson plans
- Student work samples are available and considered when writing lesson plans
- Lesson plans are aligned with division curriculum guides
- Teacher-developed assessments are aligned with curriculum guides
- State learning objectives are incorporated into lesson plans
- Lesson plans have clearly stated objectives
- Lesson plans include use of available materials
- Lesson plans include activities and strategies to engage students of various ability levels
- Lesson plans address different learning modalities and styles
- Lesson plans include required accommodations for students with special needs
- State standards are posted in classroom
- Lesson plans include pacing information
- Lesson plans for a substitute or an emergency are located in an easily accessible area of the classroom containing all necessary information

Red Flags of Ineffective Teaching

- No (or very few) lesson plans are available
- Student assessment and diagnostic data are not available
- No connection between assessment data and lesson plans is evident
- No differentiated instruction is provided
- Lesson plans are not aligned with local or district curriculum guides
- State learning objectives are not incorporated into lesson plans
- Activities that are unrelated to the learning objective are selected
- No plans for or anticipation of potential problems
- Lesson plans mainly consist of text or worksheets
- Students are not engaged in learning
- Lesson plans do not address different learning styles of students
- Lesson plans do not reflect accommodations for students with special needs

- State standards are not posted in the classroom
- Information on pacing is not discernible in lesson plans
- Lesson plans are disjointed
- Lesson plans are short and do not allow for smooth transitions between activities
- Poor or inconsistent student achievement is the prevalent pattern
- Emergency lesson plans are not available
- Materials for substitutes are not available (attendance rolls, class procedures, lesson plans, fire and tornado drill evacuation route maps)

Implementing Instruction

Effective teaching combines the essence of good classroom management, organization, effective planning, and the teacher's personal characteristics. The classroom presentation of the material to the students and the provision of experiences for the students to make authentic connections to the material are vital. The effective teacher facilitates the classroom like a symphony conductor who brings out the best performance from each musician to make a beautiful sound. In the case of the classroom, each student is achieving instructional goals in a positive classroom environment that is supportive, challenging, and nurturing of those goals. The best lesson plan is of little use if the classroom management component is lacking or the teacher lacks rapport with the students. Implementing instruction is like opening night at the theater where all the behind-the-scenes work is hidden and only the magic is seen by the audience. Effective teachers seem to achieve classroom magic effortlessly. The trained observer, on the other hand, is likely to feel great empathy and appreciation for the carefully orchestrated art of teaching.

Positive Qualities

- Uses student questions to guide the lesson
- Uses pre-assessments to guide instruction
- Develops elements of an effective lesson
- Uses established routines to capture more class time (e.g., students have roles to play, such as passing out materials so the teacher need not stop the momentum of the lesson)
- Incorporates higher-order thinking strategies
- Uses a variety of activities and strategies to engage students

- Monitors student engagement in all activities and strategies
- Has high numbers of students actively engaged in the class continuously
- Adjusts the delivery and pacing of the lesson in response to student cues
- Effectively uses the entire classroom (e.g., teacher movement throughout the room)
- Student-centered classroom rather than teacher-centered classroom
- Provides feedback (verbal, nonverbal, and written)
- Designs and bases assignments on objectives
- Assists students in planning for homework assignments

Red Flags of Ineffective Teaching

- Experiences student behavior problems
- Has unengaged students (e.g., bored, off-task, asleep)
- Has poor student performance in class and on assessments
- Gives vague instructions for seatwork, projects, and activities
- Unresponsive to student cues that the delivery of instruction is ineffective
- Lacks variety in instructional methods used
- Has difficulty individualizing instruction
- Uses outdated material or terminology
- Fails to implement needed changes pointed out by peers or supervisors
- Tells students to "know the material"
- Does not apply current strategies or best practices
- Uses poor examples of or improper English
- Transitions slowly between activities or lessons

Monitoring Student Progress and Potential

Effective teachers have a sense of how each student is doing in the classes that they teach. They use a variety of formal and informal measures to monitor and assess their pupils' mastery of a concept or skill. When a student is having difficulty, the teacher targets the knowledge or skill that is troubling the student, and provides remediation as necessary to fill in that gap. Communication with all parties vested in the success of the student is important since parents and instructional teams are also interested in monitoring the student's progress. Monitoring of student progress and potential need not be solely the responsibility of the teacher; indeed, an effective teacher facilitates students' understanding of how to assess their own performance, that is, assists them in metacognition. However, ultimate accountability does lie with each teacher, so documenting a student's progress and performance needs to be accomplished. An effective teacher who has observed and worked with a student has a sense of the potential that student possesses, encourages the student to excel, and provides the push to motivate the student to make a sustained effort when needed.

Positive Qualities

- Enables students to track their own performances
- Grades homework
- Gives oral and written feedback
- Documents student progress and achievement
- Makes instructional decisions based on student achievement data analysis
- Circulates in the room to assist students and provide praise
- Gives pretests and graphs results
- Considers multiple assessments to determine whether a student has mastered a skill
- Keeps a log of parent communication
- Uses student intervention plans and maintains records of the plan's implementation
- Records team conference or teacher conference with students
- Gives assessments on a regular basis
- Makes use of a variety of assessments
- Uses rubrics for student assignments, products, and projects
- Practices differentiated instruction based on assessment analysis
- Exercises testing accommodations for special-needs students
- Maintains copies of all correspondence (written, e-mail) concerning student progress
- Holds teacher-parent-student conferences and meetings
- Produces class newsletters
- Invites parents and guests to special class events
- Maintains class Web page featuring student work, homework assignments
- Communicates with informal progress reports

- Uses appropriate and clear language in communications
- Participates in Individualized Education Program (IEP) meetings for special-needs students

Red Flags of Ineffective Teaching

- Does not monitor student progress or allow for questions
- Infrequently analyzes or lacks appropriate data
- Infrequently or fails to monitor student progress
- Does not keep a communication log
- Does not record conferences with students or parents and guardians
- Uses extremes in grading—high failure rates or unrealistically high percentage of excellent grades
- Fails to reteach after assessments to correct gaps in student learning
- Offers little or no variety of assessments
- Ignores testing accommodations for special-needs students
- Does not document or holds few parent communications (communication may include conferences, phone calls, e-mail, newsletters, Web sites)
- Uses vague, technical, or inappropriate language in communications
- Does not participate in or attend IEP meetings for students with special needs

Professionalism

Teachers have been portrayed in a variety of ways in the media, ranging from detrimental images to beloved masters of their craft who inspire students to excel. Effective teachers can be seen, heard, and sensed. The effective teacher engages in dialogue with students, colleagues, parents, and administrators and consistently demonstrates respect, accessibility, and expertise. Effective teachers are easily identified through their adept use of questioning and instruction given in the classroom. Finally, an observer who knows from all sources that this person truly makes a difference in the classroom can sense the presence of an effective teacher. The true teacher is a master of teaching.

Positive Qualities

- Practices honest two-way communication between teacher and administrators
- Communicates with families of students

- Maintains accurate records
- Reflects on teaching, personally and with peers
- Attends grade-level meetings; is a team player
- Attends and participates in faculty and other school committee meetings
- Focuses on students
- Performs assigned duties
- Implements school and school district goals and policies
- Acts "globally" around the school for the benefit of the whole school
- Volunteers to assist others
- Seeks community involvement
- Seeks leadership roles on school committees and teams
- Contacts central office personnel for technical support when needed
- Treats colleagues with respect and collegiality
- Works collaboratively with faculty and staff
- Attends professional development opportunities (e.g., conferences, graduate classes, workshops)
- Maintains current teaching certification
- Submits required reports on time and accurately
- Writes constructive, grammatically correct communications
- Writes appropriately for the intended audience
- No testing irregularities found that are within the control of the teacher
- Submits lesson plans and assessment documents on time
- Submits grades on time
- Maintains a calendar of report deadlines
- Keeps an accurate and complete grade book

Red Flags of Ineffective Teaching

- Gives negative feedback routinely at meetings
- Displays unwillingness to contribute to the mission and vision of the school
- Refuses to meet with parents and guardians or colleagues outside of contract hours
- Resents or is threatened by other adults visiting the classroom
- Does the minimum required to maintain certification or emergency certification status
- Submits reports late

- Submits grades late
- Writes inaccurate or unclear reports
- Does not update grade book or it is inaccurate

Subject Specific Qualities

Most teachers have been in an unfamiliar situation where they were not certain of what would be considered normal versus questionable. For example, while a chemical fume hood would look out of place in a history classroom, it is a common element in a chemistry classroom. The following subject specific qualities and red flags are shared to equip the reader with some indicators of what may be observed in effective and ineffective teachers' rooms.

English and Language Arts

An effective English teacher has a classroom that is text-rich and integrates the elements of the English language through writing, reading, and oral expression, including listening. The teacher is well read in the subject area and works diligently to convey enthusiasm for the subject. The teacher encourages the reading of great works of literature for class projects and for pleasure, maintains writing portfolios, provides opportunities for discussion, and gives plenty of feedback. In today's changing technological classrooms, software programs may be used to help enhance reading and writing instruction as well as research skills. The effective teacher's classroom integrates all key components of the English curriculum.

To enhance oral language in students, the teacher may

- Provide instruction in listening
- Model good listening behaviors
- Give instruction in speaking skills and verbal and nonverbal messages
- Provide activities for the preparation, practice, and presentation of formal speeches
- Demonstrate and practice the adaptation of oral communication strategies to match the needs of the situation and setting
- Offer opportunities to participate in role-plays, interviews, and impromptu speeches
- Lead discussion groups
- Give instruction in dialect, pronunciation, and articulation

- Use vocal elements in oral presentations: pitch, volume, rate, quality, animation, and pause
- Give instruction on how to use media for research, analysis, and evaluation of media messages

The teacher uses strategies in reading instruction, including

- Read-alouds
- Independent reading
- Dyad reading (paired reading)
- Library visits to promote use of the media center and facilitate book choice
- Classroom libraries
- Providing blocks of time for students to read
- Cause-and-effect frame
- Sequence of events
- Compare and contrast matrix
- Proposition and support outline
- Debriefing
- Discussion web
- Word wall
- Think-pair-share
- Literature circles
- Reader's workshop

Writing instruction may include these types of activities

- POWER writing (prewriting, organizing, writing, editing, rewriting)
- Peer-reviews and constructive criticism
- In-class writing and publishing
- Writer's workshop
- Journals
- Use of technology to facilitate the writing process
- Writing in different forms (technical, persuasive, research, expository, narrative, and poetry)
- Grammar instruction
- Outlining
- Note-taking (e.g., Cornell notes)

History and Social Studies

The effective teacher empowers students to think about history and the implications of past choices, in order to guide thinking about the future or to find patterns within history. Students are taught a blend of essential facts and skills that enable them to access knowledge and make interpretations of history. The effective history or social studies teacher usually has an area of historical expertise that is evident in discussions and interactions with students on that period in history. Teachers use their own understanding of how history works to teach students to construct their own personal bank of tools to critically examine current news and past events. The effective teacher finds ways to make the events of old become relevant to the students of today.

The teacher uses a variety of preteaching strategies including
- K-W-L charts (Know, Want to Know, Learned)
- Learning logs
- Timelines
- Anticipation guides
- Graphic organizers

The teacher uses a variety of classroom practices, such as
- Simulations
- Debates
- Independent research projects
- Socratic seminar
- Internet and technology based activities
- Historical archives and primary document analysis
- Current events
- Mapping (globes, wall maps, flat maps, computer maps, and sketched maps)

The teacher may use a variety of assessment strategies
- Cloze read activities
- Multimedia presentations
- Reaction papers
- Historical interpretation
- Rubrics
- Teacher-made tests, both objective and essay

Mathematics

An effective mathematics teacher has the ability to facilitate students' ability to understand, analyze, and solve problems. The teacher presents real-world applications of the math concepts to make the application real for the students. The teacher facilitates students thinking beyond the paper and the pencil to how mathematics is evident and applied to everyday life. The room probably is filled with manipulatives and decorated with math-related posters and 3-D constructions. The chalkboard tray holds oversized tools of the ones students use, such as protractors and compasses. The teacher uses the tools to break down the process and provide meaning for the class. If a student is having difficulty, the teacher is able to diagnose and remediate the gap in prior knowledge or identify where the student has misunderstood the process and gets the child back on track. Students are asked to compute problems, write about solutions, and discuss mathematics. Mathematics is not just numbers and symbols; it is a language for understanding.

The mathematics teacher uses a variety of tools and manipulatives to teach, including

- Various papers (grid, dot, patty, and notebook)
- Calculators (4-function, scientific, and graphing)
- Measurement tools (angle ruler, balance, compass, protractor, ruler, and thermometer)
- Mathematical software programs and spreadsheets
- Commercial manipulatives (algebra tiles, cubes, Cusinaire rods, decimal blocks, fraction circles, Geo boards, Hands-on Algebra, and tangrams)
- Common materials (spinners, coins, dice, and yarn)
- Chalkboards or white boards that have grids
- Overhead calculator and transparent tiles

The effective mathematics teacher uses a variety of approaches to teaching the content, including

- Application problems using real-life data
- 3-D constructions
- Reading and writing story problems
- Using visuals in problems

- Mental mathematics
- Estimation
- Discussing mathematical concepts
- Talking through how to do the problem by students
- Tessellations
- Examining musical patterns in algebra
- Considering angles and proportions in art when studying measurement
- Venn diagrams

Science

Scientific discoveries are constantly adding to and changing the body of science knowledge. Effective teachers engage students in experimentation and discussion of the findings. They are aware of changes and highlight new and older discoveries with students as, together, they investigate and develop an understanding of science.

The science classroom has safety as a focus with the following items displayed or easily available

- Posted safety rules
- Available protective materials (lab aprons and goggles)
- Fire extinguisher or fire blanket in rooms using flammable materials
- Classroom shut-off valves, if present, are labeled
- Chemicals are stored with MSDS sheets (materials safety data sheets)
- Marked disposal bin for broken glass

The science teacher uses a variety of techniques to facilitate the learning of the curriculum objectives

- Cooperative learning groups
- Computer simulations
- Laboratory investigations and experiments
- Lab write-ups
- Hands-on activities
- Demonstrations
- Reading scientific articles and journals

The science classroom contains a variety of equipment, including

- Beakers
- Graduated cylinders
- Flasks
- Rulers, compasses, and protractors
- Balances
- CBL (computer-based laboratory) probes
- Graphing calculators and scientific calculators
- Plant grow light
- Dissection tools

A teacher is not simply effective because of the presence of qualities. Likewise, red flags do not necessarily signal an ineffective teacher, just a behavior that needs improvement. Just as teachers must differentiate for student needs, additional qualities and red flags may be applicable to your unique situation. Teachers are effective because of how various personal and professional factors combine and are executed in a classroom.

Section III: Annotated Bibliography

For the reader who would like to know more about specific aspects of the teacher effectiveness research, a selection of noteworthy resources are summarized in an annotated format. The annotations are presented in a straightforward, compact, and uniform format for ease in referencing and using the information. The matrix that precedes the annotated bibliography is a guide designed to connect the annotations with chapters 1–6. Additionally, a complete list of all references used in *Qualities of Effective Teachers* is provided in References.

Annotation Matrix for Selected References

Reference	Prerequisites	The Person	Management & Organization	Organizing for Instruction	Implementing Instruction	Monitoring Progress and Potential
Cawelti, G. (1999a)				○	○	○
Cawelti, G. (1999b)		○		○	●	○
Cotton, K. (2000)		●	●	○	●	●
Cunningham, P. M., & Allington, R. I.				●	●	
Darling-Hammond, L. (2000)	●	●		●	●	●
Darling-Hammond, L., Berry, B. & Thoreson, A.	○					
Emmer, E. T., Evertson, C. M., & Anderson, L. M.		●	●	○	●	
Ferguson, P. & Womack, S. T.	○					
Fetler, M.	●					
Goldhaber, D. D., & Brewer, D. J.	●					
Good, T. L., & Brophy, J. E.		●	●	●	●	
Hanushek, E.	●		●			
Hawk, P. P., Coble, C. R., & Swanson, M.	○					
Haycock, K.	●					
Johnson, B. L.	●	●	●	●	●	●
Marzano, R. J., Pickering, D., & McTighe, J.		●	●	●	●	●
Mason, D. A., Schroeter, D. D., Combs, R. K., & Washington, K.	○		○	○	●	○
McBer, H.		○				
Miller, J. W., McKenna, M. C., & McKenna, B. A.	○			○		
Monk, D. H., & King, J. A.	○	○				
NASSP Bulletin	○	○			●	
Peart, N. A., & Campbell, F. A.	○	●	○	○	○	○
Rowan, B., Chiang, F. S., & Miller, R. J.	○	●				
Shellard, E., & Protheroe, N.					○	
Stronge, J. H., & Tucker, P. D.				●		
Wang, M. C., Haertel, G. D., & Walberg, H. J. (1993b)			●	●	●	●

CAWELTI, G., editor. 1999. ***Handbook of Research on Improving Student Achievement: The Schooling Practices That Matter Most.*** Publication Information: Educational Research Service. Type of Publication: Handbook.

Keywords: Organizing for Instruction, Implementing Instruction, Monitoring Progress and Potential.

Summary: This research-based compendium of classroom practices for enhancing student achievement was compiled for use by teachers, principals, other instructional leaders, and policy makers. In addition to providing information on specific educational practices, the book contains feedback from users of the first edition of *Handbook of Research on Improving Student Achievement*. The handbook discusses the productive use of this information in six broad categories: (1) Teacher and staff development—The *Handbook* is a useful tool to validate the instructional practices that teachers are already employing. (2) Curriculum development and improvement—School districts use the *Handbook* to strengthen weaknesses that are identified by standardized tests. (3) Teacher evaluation process—The *Handbook* can be used as a resource by principals when observing teachers. (4) Development activities and a reference for principals and other administrators—Information from the *Handbook* is useful for administrators in preparing presentations for association meetings. (5) School improvement and planning activities—Districts will find the *Handbook* useful in systematic curriculum review. (6) Higher education programs—College and university professors will be able to use the *Handbook* as a graduate level textbook.

The *Handbook* is also a resource for the specific disciplines in K–12 classrooms. It addresses specific practices for use in the arts, foreign language, health education, language arts, mathematics, oral communications, physical education, science, and social studies.

CAWELTI, G. 1999. ***Portraits of Six Benchmark Schools: Diverse Approaches to Improving Student Achievement***. Publication Information: Published by the Educational Research Service. Type of Publication: Monograph.

Keywords: The Person, Organizing for Instruction, Implementing Instruction, Monitoring Progress and Potential

Summary: Six schools from around the country are profiled as models for their approaches to meeting the needs of challenging students. Although the schools have varying approaches to creating high standards for student achievement, they have specific factors in common. The common factors include a focus on standards, teamwork, the principal as an instructional leader, changes to the student's instructional life, and dedicated teachers. In all six schools, the teachers' foundational commitment to student success is instrumental in the quality of the approaches taken by schools. On a daily basis, the teachers implement strategies to promote student success. Common denominators of these benchmark schools include teachers committed to the daily task of preparing students; high standards; an environment to ensure success; and unpredicted achievement at high levels based on student characteristics. In addition, the model schools link their programs to state-established standards and develop high-quality staff development practices. Parental support is strong and includes the monitoring of assignments by parents. For students who require additional assistance, summer programs are available to provide the support they need.

Each of the six profiled schools is unique in its approach to meet the needs of the student population. Strong leadership is vital to give direction, and the teachers are exemplary in their dedication to be accountable in order to effect change.

COTTON, K. 2000. ***The Schooling Practices That Matter Most.*** Publication Information: Northwest Regional Educational Laboratory. Type of Publication: Booklet.

Keywords: The Person, The Symphony Conductor, Organizing for Instruction, Implementing Instruction, Monitoring Progress and Potential.

Summary: In this booklet, written for classroom teachers, the author outlines the contextual and instructional factors drawn from the long list of known effective educational practices that he feels "enable virtually all students to learn successfully." The author states that he omitted factors, such as school size and socioeconomic status, that contribute to student learning since educators can only affect them minimally. The scope of this booklet is limited to those factors that can be addressed by teachers.

Cotton identifies these ten contextual factors: (1) academically heterogeneous class assignments; (2) flexible in-class grouping; (3) maximized learning time; (4) monitoring student progress; (5) parent and community involvement; (6) primary focus on learning; (7) safe and orderly school environment; (8) small class size; (9) strong administrative leadership; (10) supportive classroom climate.

Cotton identifies five instructional attributes: (1) careful orientation to lessons; (2) clear and focused instruction; (3) effective questioning techniques; (4) feedback and reinforcement; (5) review and researching as needed.

Cotton also explains that all these "critical attributes" do not need to be present for a student to learn well. The families of some students may provide enough experiences and support that can effectively compensate for an attribute lacking in a particular school. Individual students may have enough innate ability that they learn well in less than ideal conditions. The author maintains that all of these attributes need to be present for all students to learn.

CUNNINGHAM, P., & ALLINGTON, R. 1999. ***Classrooms That Work: They Can All Read and Write.*** Publication Information: Addison-Wesley. Type of Publication: Book
Keywords: Organizing for Instruction, Implementing Instruction, Monitoring Progress and Potential.
Summary: In an examination of successful reading and writing strategies for primary and intermediate school students, educators historically have faced various obstacles in their efforts to develop literacy in their students. The authors describe these problems and present specific approaches by which to overcome illiteracy. Of primary importance is the need for authentic writing and reading activities to be central to the curriculum and the school day if students are to become literate. Specific strategies are successful in guiding and supporting reading and writing for all students and for those who have particular difficulty learning to read. Activities, such as phonics, are presented that increase students' decoding and spelling fluency by teaching them to pronounce, spell, and look for patterns in words. Both the development of knowledge specific to the disciplines of science and social studies and the promotion of the abilities of reading, writing, and vocabulary in learning these disciplines are examined. Techniques are presented that enable educators to integrate, throughout the day and week, the components critical to learning in kindergarten, primary, and intermediate classrooms. In addition, larger school and social issues, such as class size and community involvement, impact literacy.

DARLING-HAMMOND, L. 2000. **Teacher Quality and Student Achievement: A Review of State Policy Evidence.** Publication Information: *Educational Policy Analysis Archive*, 8 (1), 35 pages. Available online from http://epaa.asu/epaa.asu.edu/epaa/v8n1/. Type of Publication: Online journal.
Keywords: Prerequisites, The Person, Organizing for Instruction, Implementing Instruction, Monitoring Progress and Potential
Summary: The 50-state study of policies for teacher education, licensing, hiring, and professional development indicate a relationship between teacher quality and student achievement. The 1993–1994 Schools and Staffing Surveys (SASS) and the National Assessment of Educational Progress (NAEP) results, along with case studies and policy

surveys, provide the data. The results indicate a correlation between teacher preparation and certification to student reading and mathematics achievement before and after controlling for language and poverty. Criteria for teacher preparation range from requirements for a bachelor's degree in states with high student achievement to requirements for only 6 weeks of student teaching in other states. Since the 1980s when the United States began investing in teacher preparation in reading, students have compared favorably with students in other countries. In the Third International Mathematics and Science Study (TIMSS) of 25 nations, U.S. students ranked 18th in mathematics and 17th in physics with 50 percent of the country's physics teachers uncertified or with no minor in the field.

The results of Darling-Hammond's study indicate that teachers certified or degreed in their teaching field correlate positively with higher student outcomes in reading and mathematics. Students in poverty and of non-English-speaking status are more likely to have uncertified teachers. Class size and pupil-teacher ratios do not seem to correlate to student achievement. The teacher's verbal ability, content knowledge, licensing exam scores, and professional development do seem to affect student achievement positively.

DARLING-HAMMOND, L., BERRY, B., & THORESON, A. Spring 2001. **Does Teacher Certification Matter? Evaluating the Evidence.** Publication Information: *Educational Evaluation and Policy Analysis*, (23)1, 57–77. Type of Publication: Journal.

Keywords: Prerequisites.

Summary: The authors present alternate conclusions to those reached by Goldhaber and Brewer, who propose from their research that states eliminate teacher certification requirements. According to Darling-Hammond, the data upon which their proposal was based included 24 math and 34 science teachers, a minute percentage of the total sample of 3,469 teachers. From Goldhaber's data, Darling-Hammond and coauthors conclude that certified teachers have a greater influence on student achievement than teachers with only a degree in their teaching field. This suggests that the preparation necessitated by state certification requirements is likely to increase subject matter competence. In addition, emergency and temporary certification status is nonrenewable by most standards after one to two years. In most states teachers who hold these types of credentials are fully qualified educators who can be classified in one of the following categories: certified in another state; returning after a hiatus from teaching; fully qualified in another field or in their teaching field except for completion of one course or test.

The authors reinterpret the data as follows. Students of experienced, certified teachers had significantly higher achievement than students of less experienced teachers with non-standard certification. An education degree is a major factor contributing to higher achievement along with years of teaching experience. Degrees in the field and in education have a positive influence on student achievement. Students of experienced teachers with standard certification have significantly higher achievement in math and science than students of less experienced teachers with non-standard certification. Critical to the issue of certification is the vast variability in standard and alternative teacher preparation programs.

EMMER, E. T., EVERTSON, C. M., & ANDERSON, L. M. May 1980. **Effective Classroom Management at the Beginning of the School Year.** Publication Information: *The Elementary School Journal*, *80* (5), 219–231. Type of Publication: Journal.

Keywords: The Person, The Symphony Conductor, Organizing for Instruction, Implementing Instruction.

Summary: The study examines how effective and less effective teachers differ in behavior management, instruction, student concerns, and constraints. The study considers personality characteristics of 27 third grade teachers who were observed throughout the year with a focus on their initial strategies to start the year. Based on the observations, teacher interviews, and factors to establish comparable classrooms, the teachers were divided into two groups where the only difference was effectiveness. Seven teachers were included in the effective managers group, and seven teachers were included in the less effective group.

Less effective teachers tended to issue general criticisms such as "some children are too noisy" rather than addressing specific students. They had difficulty employing individualized instruction while other students engaged in off-task behavior. Instructions for seatwork were vague, and no monitoring was done to evaluate student understanding of expectations. They did not anticipate or plan for problems and were distracted from the class when problems impeded classroom operations.

The study concluded that more effective teachers spend maximum contact time with students the first day. They reinforce rules by explaining and reminding students; are good monitors of behavior and promptly stop inappropriate behavior; anticipate and work out procedures to address student needs. Effective teachers give clear, detailed instructions; anticipate student attention spans when designing lessons; anticipate and compensate for constraints such as a lack of supplies. These teachers have higher levels of student engagement and lower levels of off-task behaviors, and have higher ratings for listening and expressing feelings. Both groups of teachers in the study treated students equitably.

FERGUSON, P., & WOMACK, S. T. January-February 1993. **The Impact of Subject Matter and Education Coursework on Teaching Performance**. Publication Information: *Journal of Teacher Education*, 44 (1), 55–63. Type of Publication: Journal.

Keywords: Prerequisites.

Summary: The three-year study focuses on the graduates of Arkansas Tech University's teacher education program to evaluate the effectiveness of the university's program and to see to what extent coursework can be used to predict performance of the student teachers. Cooperating teachers, content specialists, student teaching supervisors, school of education student teaching supervisors, and the student teachers' evaluations on a 107 Likert-response item survey were used. Data from the four sources were collected for 266 students.

The results of the study indicated that coursework is the strongest predictor of teaching performance. Grade point average (GPA) and National Teacher Exam (NTE) specialty scores account for less than 4 percent of the variance in teacher performance. Increased coursework in the content area at the expense of pedagogical coursework will be counterproductive. Raising the GPA requirements above 2.5 for acceptance into teacher education programs will unnecessarily reject 63 percent of the participants in the study. Teacher education makes a difference in teaching performance.

The studies cited in the literature review reinforce the researchers' findings that subject matter preparation is important, but not sufficient by itself. The impact of teacher education is documented and shows a positive relationship between teacher education coursework and student achievement. In addition, the literature review indicates that not only did alternatively prepared teachers have more difficulty in day-to-day teaching than traditionally prepared teachers, but also that certified teachers are more effective than teachers with less formal training.

FETLER, M. March 25, 1999. **High School Staff Characteristics and Mathematics Test Results.** Publication Information: *Educational Policy Analysis Archives*, 7 (9), 14 pages. Available online from http://epaa.asu.edu/epaa/v7n9.html. Type of Publication: Online Journal.

Keywords: Prerequisites.

Summary: In a California study, mathematics teachers with majors and minors in the subject were found to have students with higher test scores. This study was conducted to determine if the shortage in qualified math teachers results in lower test scores in high school mathematics. The Stanford Achievement Test (Stanford 9) and the annual state survey Professional Assignment Information Form results are used to determine how teachers' educational level and years of service affect student achievement. The issues of teacher preparation and experience are addressed after factoring out the impact of poverty. In this study of mathematics teachers, 10.5 percent had emergency permits, and 60 percent had been teaching 10 or more years.

Student test scores increased from grades 9–11, as a factor of student attrition and selective testing, as high-performing students elected to take upper-level mathematics courses. Schools with higher levels of poverty tended to have fewer well-prepared teachers and lower test scores. Teacher experience and preparation were significantly related to achievement when poverty was factored out. The more experienced and educated the staff, the higher the student achievement test scores will be. Schools with higher percentages of teachers on emergency permits tend to have lower test scores. The researcher suggested that the shortage of qualified mathematics teachers lowers student achievement scores.

The authors also suggested strategies for recruiting qualified teachers including staff development for unqualified teachers, increasing undergraduate requirements for college mathematics, and establishing a uniform assessment of the subject matter knowledge required to teach high school math successfully.

GOLDHABER, D. D., & BREWER, D. J. Summer 2000. **Does Teacher Certification Matter? High School Teacher Certification Status and Student Achievement.** Publication Information: *Educational Evaluation and Policy Analysis, 22* (2), 129–145. Type of Publication: Journal.

Keywords: Prerequisites.

Summary: This study examines the impact of teacher certification and state-by-state differences in teacher licensure requirements on student performance. The researchers test whether students of teachers possessing emergency, probationary, or private school certification have lower scores than students of teachers with standard certification. Of the teachers, 86 percent had standard certification in math, and 82 percent had standard certification in science. In a follow-up survey of seniors, studied in the National Educational Longitudinal Study of 1988, the following results are found:

- Students with teachers with standard or private school certification in mathematics show a 7–10 point gain in math test scores in 10th and 12th grades.
- Students who perform poorly in math in a previous grade are more likely to be assigned in 12th grade to a teacher without standard certification.
- Teachers with higher scores on a state certification exam have students with higher scores on math examinations.
- Math teachers with increased college coursework in mathematics have higher performing students.

No mention is made in the study as to the high school math levels that these teachers teach. No evidence is found that supports the belief that standard certified teachers outperform those teachers with emergency certifications. The authors speculate that school divisions may have more carefully screened these emergency certified teachers for ability and content knowledge. However, students whose teachers are teaching outside their field in math perform more poorly than students whose teachers have standard certifications in math.

GOOD, T. L., & BROPHY, J. E. 1997. **Increasing Teacher Awareness Through Observation**. Publication Information: *Looking in Classrooms*, chapter 2. Type of Publication: Textbook.

Keywords: The Person, The Symphony Conductor, Organizing for Instruction, Implementing Instruction.

Summary: Teachers receive a great deal of information throughout the course of the day and must make spontaneous decisions. Often they are unaware of classroom events because the interactions are rapid; teachers are sensitive to different stimuli; they are not taught to monitor and study their instructional behavior; and feedback to teachers about their own classroom behavior is rare. The reality is that teachers are very busy preparing lessons, interacting with students, and providing feedback. The chapter considers the benefits of increasing teachers' awareness of classroom interactions and indicates areas for improvement.

- Interpret and respond to student behavior immediately
- Focus on giving meaning to instruction, model techniques for acquiring information from reading and provide opportunities to apply the skill

- Call on all students, not just the most capable; give frequent praise
- Balance attention given to each gender during particular subjects
- Allocate time based on what is being accomplished instructionally and maximize interactive instructional time
- Vary assignments and opportunities for the learner
- Give all students, regardless of ability, equal amounts of time to respond to questions

To increase effectiveness, teachers may benefit from observing their own teaching through the use of technology or reflections of observers. The authors suggest that in reviewing videotapes, trained consultants are a valuable resource to help the teacher identify what to look for in the lesson.

HANUSHEK, E. 1971. **Teacher Characteristics and Gains in Student Achievement: Estimation Using Micro Data.** Publication Information: *American Economic Review, 61* (2), 280–288. Type of Publication: Journal.

Keywords: Prerequisites, The Symphony Conductor.

Summary: Various factors, including characteristics of K–3 teachers, were evaluated for their effect on student achievement in a California school with large Mexican-American and Caucasian populations. The teacher characteristics included the level of education, teaching experience, and verbal facility, which was defined as intelligence and communication skills. Data used in the study include student Stanford Achievement Test scores, teacher surveys, and scores from a verbal facility test given to teachers.

The analysis indicates that the teacher makes a significant difference in the performance of white students, but does not affect the achievement of Mexican-American students, who progressed at a slower rate regardless of the teacher.

It was also shown that third graders with a teacher with recent educational experiences showed 0.2 to 0.3 years of additional gains in reading achievement. Verbal ability significantly affects achievement for a specific population of white children but does not affect the achievement of the others. Teaching experience and graduate degrees do not contribute to gains in student achievement scores except for a specific white population. Language may be a barrier for the Mexican-American students in this school district. More time spent on discipline negatively affects achievement.

HAWK, P. P., COBLE, C. R., & SWANSON, M. May-June 1985 **Certification: It Does Matter.** Publication Information: *Journal of Teacher Education*, *36* (3), 13–15. Type of Publication: Journal.

Keywords: Prerequisites.

Summary: The study investigated the differences between certified and uncertified mathematics teachers in middle and high school in the areas of student achievement, content knowledge, and instructional presentation skills. Noncertified teachers were characterized as those who were not certified in the area of mathematics, but who did possess state certification in another field. The study matched 18 certified and 18 noncertified teachers in the same school who teach the same mathematics course to 826 students of similar ability; however, the teachers were not matched by years of experience. The pretest scores of these students on the Stanford Achievement Test for general math and the Stanford Test of Academic Skills for algebra did not differ significantly. To consider professional skills, trained observers conducted classroom observations. The teachers took the Descriptive Tests of Mathematics Skills to measure their mathematical knowledge. Five months later, the students were given the same Stanford test as a posttest to assess student achievement.

The study found that student achievement was greater for students taught by teachers certified in their field. Certified teachers scored significantly higher on instructional presentation, suggesting that those who are more knowledgeable in their field are more successful in presenting material to students. In algebra, certified teachers scored significantly higher on content knowledge. Teacher demographics such as years of teaching experience or the type of degree earned did not significantly affect student achievement or teacher performance.

The results suggest that the factors of content knowledge and instructional strategies for teachers teaching in their field combine to increase student achievement.

HAYCOCK, K. Spring 2000. **No More Settling for Less.** Publication Information: *Thinking K–16*, *4* (1), 3–12. Type of Publication: Journal.

Keywords: Prerequisites.

Summary: Certification, strong content background, classroom experience, and cumulative effects of teacher quality were considered in a study of the distribution of qualified teachers in the schools of children of color and lower socioeconomic status.

The results indicate a disparity in the number of qualified teachers among ethnic groups and socioeconomic status. High school students in high poverty (greater than 75 percent) and/or high minority (greater than 90 percent) schools are twice as likely to have noncertified teachers as students in low poverty (less than 10 percent) and/or low minority (less than 10 percent) schools. Approximately 23 percent of teachers lack certification in their subject areas. Teachers of mathematics are more likely not to be certified in their teaching field than any other core content area teacher. Students with teachers scoring higher on mathematics and verbal skill tests achieve at higher levels than students with lower scoring teachers. Schools with high concentrations of minority and poor students were more likely to have inexperienced, unlicensed, or alternatively licensed teachers.

Reducing class size tended to increase the possibility of placing an uncertified reading teacher in a California classroom from 1 percent to 12 percent. Differences within schools were found in honors and advanced placement classes. Teachers of these classes are more likely to be certified and to have more years of teaching experience. The classes tended to have disproportionate numbers of Asian, white, and upper-income students.

Suggestions to alleviate the situation include raising standards for teacher licensure, for professional development, and for university teacher preparation programs in order to ensure qualified teachers in all classrooms.

JOHNSON, **B. L.** 1977. **An Organizational Analysis of Multiple Perspectives of Effective Teaching: Implications for Teacher Evaluation.** Publication Information: *Journal of Personnel Evaluation in Education, 11*, 69–87. Type of Publication: Journal.

Keywords: Prerequisites, The Person, The Symphony Conductor, Organizing for Instruction, Implementing Instruction, Monitoring Progress and Potential.

Summary: Urban, suburban, and rural school board members, principals, and teachers from elementary, middle, and secondary schools were interviewed to determine their concepts of effective teaching and to reflect on the effect of the educator's role on teacher evaluation policy. Their descriptions of effective teaching were categorized as teacher as person, teaching process, and teaching product.

Teachers provided the most descriptors of effective teaching, followed by principals and school board members. Board members emphasized product while the principals and teachers focused on process and person, using descriptors such as instructional strategies, identification of lesson objectives, monitoring and assessing students, student-centeredness, positive learning environment, and flexibility of instruction. All three groups recognized the importance of

- Teacher as person—knowledge and caring
- Teaching process—classroom control and communication
- Product—on-task behavior and process/learning/mastery

Only teachers included teacher outcomes in their descriptors. The greatest level of consensus within a group was among teachers, which may have been attributable to the common experience of the teacher training programs that many completed.

Descriptors that maximize the commonalities and are specific enough to warrant teacher acceptance may have implications for construction of a teacher evaluation model. As a result of the study the author defined effective teaching: "Effective teaching involves a two-way communicative process initiated by a teacher who is well versed in the subject matter, caring, and able to establish and maintain classroom control. In such a setting students are continually attentive and progress in their learning."

MARZANO, R. J., PICKERING, D., & MCTIGHE, J. 1993. ***Assessing Student Outcomes: Performance Assessment Using the Dimensions of Learning Model:* Introduction**. Publication Information: *Assessing Student Outcomes: Performance Assessment Using the Dimensions of Learning Model*, Association for Supervision and Curriculum Development. Type of Publication: Book.

Keywords: The Person, The Symphony Conductor, Organizing for Instruction, Implementing Instruction, Monitoring Progress and Potential.

Summary: Dimensions of Learning, an instructional framework based on learning theory and research, is designed to help teachers become more effective in planning curriculum and instruction and in teaching to performance assessment. The theory focuses on five dimensions of learning or types of thinking that are vital for learning to occur.

- Dimension 1: Positive Attitudes and Perceptions About Learning. Learning increases when students feel comfortable in a classroom environment perceived as safe and orderly.
- Dimension 2: Acquiring and Integrating Knowledge. Instructional strategies should enable students to relate new knowledge to prior knowledge. As connections are made, information will be stored in long-term memory.
- Dimension 3: Extending and Refining Knowledge. Appropriate activities that extend and refine knowledge will enable the teacher to integrate the teaching of content and cognitive skills.

- Dimension 4: Using Knowledge Meaningfully. Instruction that enables students to apply information in meaningful ways significantly enhances learning. The five types of tasks that contribute to meaningful application of knowledge are (1) decision-making, (2) investigation, (3) experimental inquiry, (4) problem solving, and (5) invention.
- Dimension 5: Productive Habits of Mind. Developing students' minds to be self-disciplined and to think critically and creatively will enable students to become self-motivated, lifelong learners.

The five dimensions are intertwined and cannot be implemented piecemeal. Incorporation of these types of thinking in development and delivery of curriculum will strengthen the link between instruction and learning and assessment.

MASON, D. A., SCHROETER, D. D., COMBS, R. K., & WASHINGTON, K. May 1992. **Assigning Average-Achieving Eighth Graders to Advanced Mathematics Classes in an Urban Junior High.** Publication Information: *The Elementary School Journal*, 92 (5), 587–599. Type of Publication: Journal.

Keywords: Prerequisites, The Symphony Conductor, Organizing for Instruction, Implementing Instruction, Monitoring Progress and Potential.

Summary: Average-achieving 8th grade students were placed in a pre-algebra class for high-achieving students. Traditionally they would have been placed in general mathematics classes. Thirty-four average ability students took the pre-algebra course with a highly effective teacher with a master's degree in mathematics who regularly took advanced coursework and workshops to enhance teaching skills. The study attributed the high achievement of these students to the following:

- The teacher
- Use of expectation theory and communication of teacher confidence in student ability to succeed with appropriate effort.
- Workshops on active teaching
- Use of techniques identified by the National Council of Teachers of Mathematics such as an integrative approach to problem solving
- Application of word problems to the students' experiences
- Cooperative learning techniques
- Opportunities for tutoring from the teacher on an as-needed basis

The program saw a gradual increase in student scores on the Comprehensive Assessment Program Achievement Series Test during the three years of implementation. High achieving students scored significantly higher than average-achieving students; however, several students in the average-achieving group scored higher than the high achieving students. The higher achieving students earned higher grades in the class. Follow-up of the examination of high school records showed that average-achieving students who took pre-algebra as 8th graders enrolled more often in advanced math classes than their general math cohorts. The on-grade level students, who returned to the general mathematics curriculum in 9th grade, earned higher grades than their cohorts in the general math program.

McBer, H. June, 2000. **Research into Teacher Effectiveness: A Model of Teacher Effectiveness.** Publication Information: Research Report #216, Department for Education and Employment, England. Type of Publication: Research Report.
Keywords: The Person.
Summary: From research on the attributes of effective teaching and their major effect on student achievement, the author describes three characteristics of effective teaching under the control of teachers: teaching skills; professional characteristics; classroom climate. Teaching skills and professional characteristics—skills teachers bring into the classroom—interact to create a classroom climate conducive to learning. No prescribed combination of skills and characteristics creates a particular classroom environment; instead, effective teachers contribute their individual combinations of skills and characteristics in a multiplicity of ways to create successful learning environments.

Effective teachers have extensive content knowledge and possess a bank of appropriate teaching strategies, which they apply to their knowledge of the ways in which students learn. Since effective teachers significantly influence student progress, these three characteristics form a foundation for professional development programs and underscore teacher impact on raising school standards. The article analyzes and discusses the characteristics and the various levels of each one to create a model of teacher effectiveness. The teachers' descriptions were based on the following items:

- Professionalism—challenge and support, confidence, creating trust, respect for others.
- Thinking—analytical thinking, conceptual thinking.
- Planning and setting expectations—drive for improvement, information seeking, initiative.
- Leading—flexibility, holding people accountable, managing pupils, passion for learning.
- Relating to others—impact and influence, team working, understanding others.

MILLER, J. E., MCKENNA, M. C., & MCKENNA, B. A. May 1998. **A Comparison of Alternatively and Traditionally Prepared Teachers.** Publication Information: *Journal of Teacher Education*, 49 (3), 165–176. Type of Publication: Journal.

Keywords: Prerequisites, Organizing for Instruction.

Summary: The study compares a traditional certification program with an alternative certification program. The 82 teachers in the study were matched by three years of experience and teaching assignment according to grade level, subject, and school. The investigation was divided into three studies.

Study 1: Teacher Performance

No significant differences were found between the two groups in the area of pupil interaction or effective lessons.

Study 2: Student Achievement

5th or 6th grade students in the teacher's self-contained classrooms for the entire year were assessed using pretest and posttest scores earned on achievement tests. There were no significant differences on the pretest or posttest scores using the *Iowa Test of Basic Skills.*

Study 3: Teacher Perception of Teaching Abilities

Content analysis of teacher interviews found that neither group felt well prepared to start teaching. While traditionally certified teachers attribute their feelings of unease to lack of teaching experience, the alternatively certified teachers attribute their lack of behavior management and instructional preparation skills to the gaps in their educational preparation.

The alternative program utilized in this study gives individuals with bachelor's degrees condensed coursework in pedagogy and a strong mentoring component with ongoing coursework during the first year of teaching. The study concluded that, after three years, there were no discernable differences in teacher effectiveness between traditionally prepared teachers and those prepared in the alternative program.

MONK, D. H., & KING, J. A. 1994. **Multilevel Teacher Resource Effects on Pupil Performance in Secondary Mathematics and Science: The Case of Teacher Subject-Matter Preparation.** Publication Information: *Choices and Consequences: Contemporary Policy Issues in Education*, chapter 2. Type of Publication: Book.

Keywords: Prerequisites, The Person.

Summary: This study examined the effect on academic achievement of the subject-matter knowledge of secondary math and science teachers. A survey determined the number of subject-related courses taken by teachers, and items from the National Assessment of Educational Progress (NAEP) measured student performance.

- An effective teacher influences a student's willingness to focus on subject matter while an ineffective teacher discourages student interest.
- Two students with comparable SES and mathematics pretest scores enrolled in different types of mathematics courses showed different gain scores with the student in the more advanced course showing higher gains.
- The positive effect for students in advanced courses was not as great as the negative effect for students in remedial courses. However, these low-pretest students were positively affected by placement in advanced courses.
- Teacher subject matter preparation was related more strongly to positive effects for high pretest students in the sophomore year of a two-year sequence. In the second year the low-pretest students showed stronger gains, possibly due to increased subject matter coverage in math.
- In the sophomore year of students with low pretest scores, teacher experience showed positive effects. These gains could be the result of increased coverage of curriculum or of the quality of teaching.
- Students with high pretest scores in both mathematics and science were more likely to be assigned to teachers with more subject-matter preparation than students with low scores on the pretest.

NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS. 1997. **Students Say: What Makes a Good Teacher?** Publication Information: *NASSP Bulletin*, May/June 1997, 15–17. Type of Publication: Journal Article.

Keywords: Prerequisites, The Person, Implementing Instruction.

Summary: This brief article outlines some of the results of a 1996 survey of almost 1,000 students between the ages of 13 and 17 who were asked to identify characteristics of best and worst teachers. The students responded that the number one characteristic of good teachers is their sense of humor. The number one characteristic of their worst teachers was that they are "dull and boring."

The following lists of the top five characteristics of the best and the worst teachers are a result of student responses to the survey. Top five characteristics of best teachers: have a sense of humor; make the class interesting; have knowledge of their subjects;

explain things clearly; spend time helping students. Top five characteristics of worst teachers: are dull/have a boring class; do not explain things clearly; show favoritism toward students; have a poor attitude; expect too much from students.

PEART, N. A., & CAMPBELL, F. A. July 1999. **At-Risk Students' Perceptions of Teacher Effectiveness.** Publication Information: *Journal for a Just and Caring Education*, 5 (3), 269–284. Type of Publication: Journal Article.

Keywords: Prerequisites, The Person, The Symphony Conductor, Organizing for Instruction, Implementing Instruction, Monitoring Progress and Potential.

Summary: Teacher effectiveness was ranked fourth in factors affecting achievement of African American students, accompanied by cultural differences, minority status, and poverty. Forty-seven African American adults were interviewed about teacher characteristics that facilitate or inhibit school success. Four areas were identified as important for teachers to address in order to promote student achievement. (1) **Interpersonal skills:** A positive student-teacher relationship is developed by showing interest in students and demonstrating caring, concern, and empathy for them. One-on-one instruction is vital as well as teacher self-disclosure and availability. (2) **Instructional methods:** The ability to communicate the material effectively with genuine enthusiasm is essential. The teacher must have command of the content and employ a bank of effective strategies for teaching it. (3) **Motivational leader:** The teacher who sets high standards for academic success, maintains an orderly environment, and encourages students to take responsibility for their learning should also assign appropriate challenges and offer reinforcement and encouragement. (4) **Racial impartiality:** Equitable treatment of all students is imperative. In addition, school activities must be inclusive of various cultures.

Academic success of at-risk students is enhanced if a personal connection that communicates respect and caring exists between the teacher and the student. The establishment of high academic expectations and a teacher's ability to enable students to meet the standards are important factors for positive perceptions of teacher effectiveness among African Americans.

ROWAN, B., CHIANG, F., & MILLER, R. 1997. **Using Research on Employees' Performance to Study the Effects of Teachers on Students' Achievement.** Publication Information: *Sociology of Education*, 70, 256–284. Type of Publication: Journal Article.

Keywords: Prerequisites, The Person.

Summary: This article reports on a study that used the general perceptions about employees' performance to investigate the impact of teachers on student achievement. The study hypothesized that a teacher's effect on student achievement can be attributed to the variables of teacher ability, motivation, and work situation. Unlike previous research, this study examines the combined effect of these three variables on student achievement.

The study sample, consisting of 5,381 students at 382 public schools and 28 Catholic schools, was limited to students who had taken both the 8th and 10th grade National Education Longitudinal Study of 1988 (NELS) mathematics tests. The study controls for a large number of variables including prior student achievement and students' opportunities to learn the content tested on the NELS mathematics test.

The study's findings suggest that although the effect size was small, the authors consider that there is "preliminary support for the broad hypothesis that teaching performance is a function" of these three dimensions. The authors attribute the small effect size and uneven results across the variables to unreliability in measurement.

The study suggests the effect of teacher ability on student achievement varies depending on context of the ability. Highly talented and motivated teachers have the greatest effect on student achievement. Talent was defined by three measures of teacher ability: content knowledge; training in the field; and use of instructional strategies. Teacher motivation was characterized by high expectations of self and of students.

SHELLARD, E., & PROTHEROE, N. 2000. **Effective Teaching: How Do We Know It When We See It?** Publication Information: *The Informed Educator Series*, Educational Research Service, Stock # IE-0405. Type of Publication: Monograph.

Keywords: Implementing Instruction.

Summary: Specific teacher behaviors are the keys to creating engaged classroom environments with a focus on learning that produce high-performing students. The monograph states that these productive behaviors can be taught; and, in order to identify them, four case studies are examined. The major productive behaviors found in each study are as follows:

Study 1: Planning for Instruction. High-performing teachers thoroughly plan and organize for instruction.

Study 2: Combining Instructional Strategies. In the SAGE Program, characterized by small class size, rigorous academics, appropriate staff development, and community partnerships, higher performing teachers use a combination of teacher-directed and

student-directed instruction, individualized instruction for specific needs, and ongoing assessment.

Study 3: Differentiation of Instruction. High performing teachers emphasize critical thinking skills, individualized instruction to meet specific needs, and employment of appropriate teaching strategies and techniques for differing student populations. In this case study, teachers who use hands-on activities increased NAEP scores in science and math.

Study 4: Interactive Teaching Style. Teachers who were interactive rather than didactic and spent a minimum of time reviewing past information have higher achieving students. High-quality staff development was a major factor for those teachers who utilize interactive teaching methods.

The overview of the four studies indicates six behavioral characteristics of effective teachers: (1) more time spent on academic tasks and strong classroom management; (2) clear learning goals; (3) students as active learners; (4) individualized instruction to accommodate individual differences; (5) combination of skills-based and higher-level instruction; and (6) supportive and collaborative classroom climate.

A vital component for effective teaching is staff development that includes both modeling of the behaviors by master teachers and opportunities for observation and practice on the part of the teachers who desire to improve their classroom performance.

STRONGE, J. H., & TUCKER, P. D. 2001. ***Teacher Evaluation and Student Achievement.*** Publication Information: National Education Association. Type of Publication: Book.

Keywords: Organizing for Instruction.

Summary: Teachers are the most influential factor on student achievement, according to various research studies. Both the University of Texas study and Sanders' value-added research found increases in achievement among students placed with high performing, experienced teachers. In research conducted by Bob Munro, students with high performing teachers experienced the positive effects for three years, while students with low performing teachers experienced the negative effects for three years. The book examines four examples of assessment systems that use student achievement as a measure of teacher effectiveness: Assessing Teacher Performance through Comparative Student Gain Scores; Assessing Teacher Performance through Repeated Measures of Student Gains; Assessing Teacher Performance with Student Work; Assessing Teacher Performance in a Standards-based Environment.

Although student assessment measures can be used inappropriately as an indicator of teacher effectiveness, these measures are extremely valuable tools for improving student achievement. To reduce bias and maximize the appropriate use of achievement measures for teacher evaluation systems, several practices are proposed.

- Use student learning as only one component of multiple data sources.
- Consider the context in which teaching and learning occur.
- Use measures of student growth rather than a single, fixed achievement standard.
- Compare learning gains from one point to another for the same group of students, not different groups of students.
- Recognize that gain scores have pitfalls that must be avoided.
- Use a time frame that allows for patterns of student learning to be well documented.
- Use fair and valid measures of student learning.
- Select student assessment measures that are most closely aligned with existing curriculum.

WANG, M. C., HAERTEL, G. D., & WALBERG, H. J. December 1993/January 1994. **What Helps Students Learn?** Publication Information: *Educational Leadership*, *51* (4), 74–79. Type of Publication: Journal.

Keywords: The Symphony Conductor, Organizing for Instruction, Implementing Instruction, Monitoring Progress and Potential.

Summary: This meta-analysis of 331 sources results in 11,000 statistical findings that show consensus on the significant influences on learning. Direct influences, such as time spent teaching a specific topic, have more effect on student learning than indirect influences such as policies. The findings are grouped into 28 categories and ranked by scholars. Of these categories, classroom management was determined to have the greatest impact on learning. However, when the categories are regrouped into six areas of influence, the weighting of the categories shows that student aptitude, classroom instruction and climate, and out-of-school contexts are approximately equal in their influence on learning.

Student aptitude is most influential in learning. This includes metacognitive and cognitive processes, social and behavioral attributes, motivational and affective attributes, and to a lesser degree the influence of psychomotor skills and student demographics.

Classroom instruction and climate include the influences of social interactions between the teacher and student, quality of instruction, and the climate of the classroom environment.

Out-of-school contexts consider the home environment, community influences, and how time is spent outside of school. The instructional program design and the school organization affect learning to a lesser degree. The characteristics of individual states and districts have the least effect on learning since they are quite removed from the actual classroom environment. By aligning classroom practices with state and district policies and the other areas of influence, a more effective route to reform can be established.

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Index

academic enrichment, planning for, 38
achievement, student
  certification status of teachers and, 6–8
  expectations for, 36–37, 74
  homework in, 53–55
  instruction and, 34–35
  teacher effectiveness in, 65
  verbal ability of teachers and, 4
administrators, in discipline enforcement, 30
Allington, R., and P. Cunningham, *Classrooms That Work: They Can All Read and Write*, 99
Anderson, L. M., Effective Classroom Management at the Beginning of the School Year, 101–102
aptitude tests, teacher scores on, in student achievement, 4
Assessing Student Outcomes: Performance Assessment Using the Dimensions of Learning Model: Introduction (Marzano, et al.), 108–109
assessment. *See also* reflective practice
  student, 55–57, 76, 84–86
  teacher, 69–76
Assigning Average-Achieving Eighth Graders to Advanced Mathematics Classes in Urban Junior High (Mason, et al.), 109–110
At-Risk Students' Perceptions of Teacher Effectiveness (Peart and Campbell), 113
attitude, about teaching, 19–20
  checklist for, 72
  qualities for, 86–88
awareness, in classroom management, 27

behavior, student
  expectations for, 30, 73
behavior, student (*continued*)
  management of, 26, 29–31, 36
  response to, 29–31
Berry, B., Does Teacher Certification Matter?, 100–101
Brewer, D. J., Does Teacher Certification Matter? High School Teacher Certification Status and Student Achievement, 103–104
Brophy, J. E., Increasing Teacher Awareness Through Observation, 104–105

Campbell, F. A., At-Risk Students' Perceptions of Teacher Effectiveness, 113
caring, 14–15
  checklist for, 71
  definition of, 14
Carroll, Joe, on student learning, 65
Cawelti, G.
  Handbook of Research on Improving Student Achievement: The Schooling Practices That Matter Most, 97
  Portraits of Six Benchmark Schools: Diverse Approaches to Improving Student Achievement, 97–98
certification, 6–8
Certification: It Does Matter (Hawk, et al.), 106
checklists, 69–76
Chiang, F., Using Research on Employees' Performance to Study the Effects of Teachers on Students' Achievement, 113–114
classroom management skills, 26–28
  checklist for, 73
  qualities for, 79–81

Classrooms That Work: They Can All Read and Write (Cunningham and Allington), 99
Coble, C. R., Certification: It Does Matter, 106
collaboration, with other staff members, 19–20
Combs, R. K., Assigning Average-Achieving Eighth Graders to Advanced Mathematics Classes in Urban Junior High, 109–110
communication
  of expectations, 45–46, 75
  importance of, 63
A Comparison of Alternatively and Traditionally Prepared Teachers (Miller, et al.), 111
complexities
  of effectiveness, 64–65
  of teaching, 47–48, 62, 75
conscientious service, 63
consistency
  in discipline, 30–31
  in focus on instruction, 34
content knowledge, 5–6, 8–9
continuing education, 19, 20, 64
Cotton, K., *The Schooling Practices That Matter Most*, 98–99
Cruickshank, D. R., on definition of good teachers, viii
cultural background, fairness regarding, 16
Cunningham, P., and R. Allington, *Classrooms That Work: They Can All Read and Write*, 99

Darling-Hammond, L.
  Does Teacher Certification Matter?, 100–101
  Teacher Quality and Student Achievement: A Review of State Policy Evidence, 99–100
direct teaching, 43
discipline, management of, 30–31, 73
Does Teacher Certification Matter? (Darling-Hammond, et al.), 100–101
Does Teacher Certification Matter? High School Teacher Certification Status and Student Achievement (Goldhaber and Brewer), 103–104
Doyle, management defined by, 26
educational coursework, 5–6, 8
education, continuing, 19, 20, 64
Effective Classroom Management at the Beginning of the School Year (Emmer, et al.), 101–102
effectiveness
  complexity of, 64–65
  defining, vii–viii
  improving, 63–64
  summary of, 62–63
Effective Teaching: How Do We Know It When We See It? (Shellard and Protheroe), 114–115
efficacy, reflection in increasing, 21
efficiency, experience and, 9
Emmer, E. T., Effective Classroom Management at the Beginning of the School Year, 101–102
English teachers, qualities for, 88–89
enthusiasm, for learning, 18–19
  checklist for, 71
  in focus on instruction, 34
ethnicity, fairness regarding, 16
Evertson, C. M., Effective Classroom Management at the Beginning of the School Year, 101–102
examples, in clarity of explanation, 46
expectations
  for achievement, 36–37, 74
  for behavior, 30, 73
  communication of, 45–46, 75
experience, 9–10
explanation, clarity in, 45–46

fairness, 16, 71
feedback
  corrective, 56
  on homework, 54
  in reflection, 21
Ferguson, P., The Impact of Subject Matter and Education Coursework on Teaching Performance, 102
Fetler, M., High School Staff Characteristics and Mathematics Test Results, 102–103

gender, fairness regarding, 16
Goldhaber, D. D., Does Teacher Certification Matter? High School Teacher Certification Status and Student Achievement, 103–104
Good, T. L., Increasing Teacher Awareness Through Observation, 104–105
group instructional strategies, 43, 58
guided practice, in clarity of explanation, 46

Haefele, D., on definition of good teachers, viii
Haertel, G. D., What Helps Students Learn?, 116–117
Handbook of Research on Improving Student Achievement: The Schooling Practices That Matter Most (Cawelti), 97
hands-on learning, 44
Hanushek, E., Teacher Characteristics and Gains in Student Achievement: Estimation Using Micro Data, 105
Hawk, P. P., Certification: It Does Matter, 106
Haycock, K., No More Settling for Less, 106–107
High School Staff Characteristics and Mathematics Test Results (Fetler), 102–103
history teachers, qualities for, 90–91
homework, 53–55, 76

The Impact of Subject Matter and Education Coursework on Teaching Performance (Ferguson and Womack), 102
in-class testing, assessment with, 55–56
Increasing Teacher Awareness Through Observation (Good and Brophy), 104–105
instruction
  adaptation of, for student needs, 57–58, 76
  focus on, 34, 74, 81–83
  maximizing time for, 34–36, 74
  planning for, 37–39, 74, 81–83
  scaffolding approach to, 58
instructional strategies
  planning, 38–39, 74
  and teacher certification, 7–8
  and teacher experience, 10
instructional strategies (*continued*)
  use of, 43–45, 75, 83–84

Johnson, B. L., An Organizational Analysis of Multiple Perspectives of Effective Teaching: Implications for Teacher Evaluation, 107–108

King, J. A., Multilevel Teacher Resource Effects on Pupil Performance in Secondary Mathematics and Science: The Case of Teacher Subject-Matter Preparation, 111–112
knowing students, 15

language arts teachers, qualities for, 88–89
learning
  enthusiasm for, 18–19, 71
  monitoring, 55–57, 76, 84–86
  motivation for, 18–19, 71
  student engagement in, 48–49, 75
  styles of, incorporation of, 38–39
lecturing, 44
listening, 14

Marzano, R. J., *Assessing Student Outcomes: Performance Assessment Using the Dimensions of Learning Model:* Introduction, 108–109
Mason, D. A., Assigning Average-Achieving Eighth Graders to Advanced Mathematics Classes in Urban Junior High, 109–110
mathematics teachers, qualities for, 91–92
McBer, H., Research into Teacher Effectiveness: A Model of Teacher Effectiveness, 110
McKenna, B. A., A Comparison of Alternatively and Traditionally Prepared Teachers, 111
McKenna, M. C., A Comparison of Alternatively and Traditionally Prepared Teachers, 111
McTighe, J., *Assessing Student Outcomes: Performance Assessment Using the Dimensions of Learning Model:* Introduction, 108–109
Miller, J. E., A Comparison of Alternatively and Traditionally Prepared Teachers, 111

Miller, R., Using Research on Employees' Performance to Study the Effects of Teachers on Students' Achievement, 113–114
Monk, D. H., Multilevel Teacher Resource Effects on Pupil Performance in Secondary Mathematics and Science: The Case of Teacher Subject-Matter Preparation, 111–112
motivation, for learning, 18–19, 71
Multilevel Teacher Resource Effects on Pupil Performance in Secondary Mathematics and Science: The Case of Teacher Subject-Matter Preparation (Monk and King), 111–112

National Association of Secondary School Principals, Students Say: What Makes a Good Teacher?, 112–113
No More Settling for Less (Haycock), 106–107

An Organizational Analysis of Multiple Perspectives of Effective Teaching: Implications for Teacher Evaluation (Johnson), 107–108
organizational skills, 28–29
  checklist for, 73
  in focus on instruction, 34
  qualities for, 79–81
  and teacher experience, 10
  teaching, 57
out-of-field teachers, 7

parents
  in discipline enforcement, 30
  in successful homework, 53–54
Peart, N. A., At-Risk Students' Perceptions of Teacher Effectiveness, 113
Pickering, D., *Assessing Student Outcomes: Performance Assessment Using the Dimensions of Learning Model:* Introduction, 108–109
planning, for instruction, 37–39
  and teacher experience, 10
  tools for, 39
planning materials, in maximizing instruction time, 35
Portraits of Six Benchmark Schools: Diverse Approaches to Improving Student Achievement (Cawelti), 97–98
pre-assessment
  in instruction planning, 38
  for monitoring student learning, 56
preparation
  in classroom management, 26–27, 29
  for instruction, 37–39
preparation programs, 5–6
proactive management, of student behavior, 26
procedures, establishment of, 27, 28, 30
professional development, 19, 20, 64
professionalism. *See* attitude, about teaching
Protheroe, N., Effective Teaching: How Do We Know It When We See It?, 114–115

questions, use of, 48, 75

race, fairness regarding, 16
reflective practice, 20–22, 72. *See also* assessment
remediation opportunities, planning for, 38
Research into Teacher Effectiveness: A Model of Teacher Effectiveness (McBer), 110
respect, 16, 71
routines, establishment of, 28, 35–36
Rowan, B., Using Research on Employees' Performance to Study the Effects of Teachers on Students' Achievement, 113–114
rubrics, for feedback, 56
rules, establishment of, 27, 28, 30

scaffolding approach, 58
The Schooling Practices That Matter Most (Cotton), 98–99
Schroeter, D. D., Assigning Average-Achieving Eighth Graders to Advanced Mathematics Classes in Urban Junior High, 109–110
science teachers, qualities for, 92–93
self-esteem, student, increasing, 17
self-preparation, in classroom management, 26–27
service, conscientious, 63

Shellard, E., Effective Teaching: How Do We Know It When We See It?, 114–115
social interactions, with students, 17–18, 71
social studies teachers, qualities for, 90–91
staging areas, in maximizing instruction time, 35
Stronge, J. H., *Teacher Evaluation and Student Achievement*, 115–116
students
  homework in empowerment of, 54
  instruction adapted to, 57–58, 76
  involvement of, in learning, 48–49, 75
  knowing, 15
  self-esteem of, 17
  social interactions with, 17–18, 71
  success of, responsibility for, 19
student achievement
  certification status of teachers and, 6–8
  expectations for, 36–37, 74
  homework in, 53–55
  instruction and, 34–35
  teacher effectiveness in, 65
  verbal ability of teachers and, 4
student assessment, 55–57
  checklist for, 76
  qualities for, 84–86
student behavior
  expectations for, 30
  management of, 26, 29–31, 36
  monitoring, 27
  response to, 29–31
Students Say: What Makes a Good Teacher? (National Association of Secondary School Principals), 112–113
study skills, teaching, 57
subject matter expertise, 5–6, 8–9
success, student, responsibility for, 19
Swanson, M., Certification: It Does Matter, 106

Teacher Characteristics and Gains in Student Achievement: Estimation Using Micro Data (Hanushek), 105
Teacher Evaluation and Student Achievement (Stronge and Tucker), 115–116
Teacher Quality and Student Achievement: A Review of State Policy Evidence (Darling-Hammond), 99–100
teachers
  collaboration among, 19–20
  personal qualities of, 78–79
  preparation of, 3
  subject-specific, qualities for, 88–93
teaching
  attitude toward, 19–20, 72, 86–88
  complexities of, 47–48, 62, 75
testing, in-class, assessment with, 55–56
Thoreson, A., Does Teacher Certification Matter?, 100–101
time, maximizing for instruction, 34–36, 74
Tucker, P. D., *Teacher Evaluation and Student Achievement*, 115–116

uncertified teachers, 7
understanding, 14–15
Using Research on Employees' Performance to Study the Effects of Teachers on Students' Achievement (Rowan, et al.), 113–114

verbal ability, 4

Walberg, H. J., What Helps Students Learn?, 116–117
Wang, M. C., What Helps Students Learn?, 116–117
warm-up activities, 35–36
Washington, K., Assigning Average-Achieving Eighth Graders to Advanced Mathematics Classes in Urban Junior High, 109–110
What Helps Students Learn? (Wang, et al.), 116–117
Womack, S. T., The Impact of Subject Matter and Education Coursework on Teaching Performance, 102

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